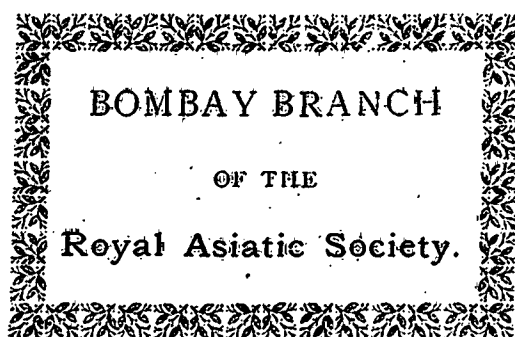




00108784



EIGHTH REPORT
OF THE
SCIENCE AND ART DEPARTMENT
OF THE
COMMITTEE OF COUNCIL ON EDUCATION.

Presented to both Houses of Parliament by Command of Her Majesty.

108784



LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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FOR HER MAJESTY'S STATIONERY OFFICE.

1861.



00108784

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EIGHTH REPORT
OF THE
SCIENCE AND ART DEPARTMENT
OF THE
COMMITTEE OF COUNCIL ON EDUCATION.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

WE, the Lords of the Committee of Your Majesty's Privy Council on Education, humbly present to Your Majesty this our Report of the proceedings of the Science and Art Department, for the year 1860.

The Report is arranged under the following heads :—

- I.—Aid afforded to the industrial classes in obtaining instruction in those branches of Science and Art, which have a direct bearing on their occupations.
 - II.—The administration of the South Kensington Museum as the central repository for examples in different branches of Science and Art, which, as far as may be practicable, are made available for the benefit of the United Kingdom, and are circulated to provincial schools.
 - III.—Institutions for the promotion of Science and Art, subject to the superintendence of the Department.
- I.—AID AFFORDED TO THE INDUSTRIAL CLASSES IN OBTAINING INSTRUCTION IN THOSE BRANCHES OF SCIENCE AND ART WHICH HAVE A DIRECT BEARING ON THEIR OCCUPATIONS.

As respects Science.

1. The system of aid to Science instruction in practical and descriptive geometry, physics, chemistry, geology, mineralogy, and natural history, by means of payments on results to the teachers and prizes to the students, which was introduced under the Minute of the 2nd June 1859, has

come into operation, and gives a highly satisfactory promise of success.

The second annual examination of teachers was held in December 1860, and 89 candidates for certificates presented themselves, being an increase of 32 over the previous year. There were 13 subdivisions of subjects, and 170 entries for subdivisional certificates; 75 candidates were successful, and 121 subdivisional certificates were taken. The Department has been at no cost for the scientific instruction of these teachers, who have come from all parts of the United Kingdom for examination.

The results of the teaching of students in Science Schools established before 1860, are stated in the Appendix C. 1, p. 36. The number of students in 1860 has been 386, paying 228*l.* 6*s.* in fees. 30 Science Classes have been established in the past year, under certificated teachers, in various places, and 1,340 candidates have registered their names for the first general examination of students which will be held in May 1861, under the superintendence of local committees responsible for the necessary arrangements (Appendix A., p. 19.)

The only examinations which have been held on the new system in the past year, took place at the Secular School, Glasgow, and at Huddersfield. The results, which are satisfactory, are stated in the Inspector's Report. (Appendix B., p. 23.)

A course of lectures on the best method of preparing for certificates and teaching a class has been given by the Professors on different scientific subjects. These lectures have since been published, with the exception of Professor Tyn-dall's, which is not yet ready (Appendix B., p. 26.)

We have caused a Directory to be prepared, affording information for the establishment of Science Classes. ...

We have had occasion to consider applications from Professors in Universities, and other persons of well known acquirements, to be accepted as being certificated to teach classes in Science, without having to undergo the prescribed examination. While we have not refused to consider individually such cases, we have proposed to regard them as exceptional, considering that the proper proof of competency is the being able to pass the usual examination.

Navigation Schools.

A report on these schools is printed (Appendix B., p. 28.) Captain Ryder, R.N., having resigned the appointment of occasional inspector, Captain Harris has been appointed to

succeed him. In 1859 there were 2,490 students, who contributed 1,239*l.* 19*s.* 10*d.* In 1860 the number has been 2,396, and the fees 1,152*l.* 1*s.* 9*d.*

As respects Art.

South Kensington Normal Training School.—The state of this school and of the teaching in connexion with it is satisfactory. 68 students in training to become teachers have received allowances, and 40 have attended the classes free; 12 have been appointed to masterships during the year.

The number of students attending the classes of the school has been 541 against 419 in 1859, and the fees have amounted to 1,457*l.* 16*s.* against 1,307*l.* 16*s.* in 1859. The *London District Schools*, including St. Martin's, the Female School in Queen Square, and Lambeth, have been attended by 1,530 students, being a considerable increase over last year. The number of poor children taught Drawing in the Metropolis by masters and mistresses in training has been 9,801, while in 1859 it was 9,411. (Appendix D., p. 47.)

In 1859 there were 78 *Schools of Art* in Great Britain and Ireland. In 1860 the number was increased to 85; schools having been established at Arbroath, Boston, Bromsgrove, Cirencester, Preston, Reading, and Stroud.

In connexion with the *Provincial Schools of Art*, 13,616 persons, chiefly adults, have been taught, and have paid 9,048*l.* 16*s.* 11*d.* for their instruction. In 1859 the number was 16,109, and the fees 9,794*l.* 2*s.* 1*d.* This decline is attributed to the volunteer movement, which has attracted the skilled artizans from the drawing school in the evening.

The number of poor children taught Drawing in *Public Schools* in the provinces has been 74,267, and the fees 2,942*l.* 12*s.* 9*d.* In 1859 the number was 67,490, and the fees 2,782*l.* 19*s.* 7*d.*

The *Diocesan* and other *Training Colleges* have been examined in Drawing, with satisfactory results. Out of 2,721 teachers and students examined, 1,600 were successful in obtaining prizes. In 1859 the number was 1,205 out of 2,783. In 1860, 79 candidates obtained certificates against 59 in 1859. (Appendix F., p. 92.)

The total number of persons receiving instruction in Drawing through the agency of the Department in the year 1860 has been 89,481, and the fees 17,221*l.* 6*s.* 8*d.* In 1859 the number was 84,972, and the fees 15,366*l.* 4*s.* 6*d.*

Art Prizes.—The number of prizes awarded in the year 1860 is shown in the following comparative table :—

	1860.	1859.
For Drawing on Slates	- 1,836	- 1,282
1st grade prizes	- 2,785	- 2,822
2nd " "	- 3,300	- 3,718
Local Medals	- 861	- 758
National Medallions	- 76	- 67

The reduction that appears in the 1st and 2nd grade prizes is accounted for by the standard having been raised. An alteration has been made in the rules respecting prizes for slate drawing (Appendix A., p. 15.)

Examples for Science and Art instruction have been furnished, under the usual regulations, to 223 schools. (Appendix J., p. 112.)

The system of paying teachers according to the results of their pupils' examinations has been in operation for the last four years in Art schools, and the following statement shows the number and nature of the payments. This statement may be useful and interesting to those who advocate the applicability of the system of paying on results to general education.

STATEMENT showing the Number of Payments made to Schools of Art in respect of Results on Examinations.

Nature of Payments.	1856.	1857.	1858.	1859.	1860.	Total.
1st Grade.—2s. for each student who passed "fair."	—	—	325	904	1,182	2,471
1st Grade.—Prizes, 3s. for each student who takes a prize.	—	756	1,553	1,501	1,449	5,259
2nd Grade.—30s. for each pupil-teacher who passes a successful examination.	188	219	376	540	408	1,731
2nd Grade.—5l. for each prize-student.	32	43	94	104	132	405
2nd Grade.—1l. for each renewal of prize-studentship.	—	—	8	54	83	145
Total - - -	220	1,018	2,356	3,163	3,254	10,011

Finding that a considerable number of large towns in the kingdom have not yet established Schools of Art, we have considered it advisable to communicate with the authorities in those towns, and to offer that an inspector should visit them, with a view to make known the system of the Department for extending the opportunity of learning drawing offered to artizans and others who are at present unable to obtain instruction. (Appendix A., p. 15.)

II.—SOUTH KENSINGTON MUSEUM.

A Select Committee of the House of Commons was appointed on the 19th June 1860, to inquire concerning this Museum, and the report was made on the 1st August. It unanimously recommended that additional space for the Art Collections should be at once provided, by glazing over the quadrangular courts formed by buildings already erected. A sum of 17,000*l.* was voted by Parliament for this purpose, and considerable progress has since been made. The courts will probably be completed in the course* of the ensuing autumn.

Mr. Cole, the General Superintendent, has presented in the Appendix the reports of the various officers in charge of the respective Divisions of the Museum.

Mr. Redgrave, R.A., Inspector-General for Art, reports that a further number of the British pictures under his charge have been placed under glass for better preservation, and that the most careful attention has been paid to the ventilation of the galleries.

A number of pictures have been sent on loan, and a valuable collection, consisting of 51 water-colour paintings, has been presented to the Department by Mrs. Ellison, of Sudbrooke Holme.

Many most important and interesting additions have been made to the *Art Collections* during the past year. Works in marble and terra cotta by Michael Angelo, Donatello, and other great sculptors, have been purchased out of the Gigli and Campana Collections of Mediæval Sculpture, and the dispersion of the Soltykoff Collection has enabled us to secure for the country the celebrated candlestick made for the Cathedral at Gloucester in the 12th century, and taken by Thomas à Beckett into Normandy, as well as other works of Art of great value and beauty.

A list of specimens received in loan is printed in Mr. Robinson's, the Superintendent's Report (Appendix L, p. 122.) These loans have been both numerous and valuable.

The collection of articles selected from the Museum for exhibition in the provinces was re-arranged in the early part of last year, and was again put in circulation in a largely increased form in June 1860. Between that time and the end of the year the Collection has been exhibited at Dorchester, Dudley, Stoke, Bridgnorth and Salford. Applications from all parts of England have been received for it in the present year, and we purpose to continue with increased activity a system which has worked so well, and

has afforded so many and great advantages to the manufacturers of the country. In compliance with numerous applications, loans of other objects of art have been sent to Cambridge, Sheffield, Reading, Darlington, Aston Hall, Birmingham, Salford, Lambeth, Stoke, York, and Wenlock.

The visitors to the Library of the Museum have increased during the past year. In 1860 the number was 7,981 against 6,364 in 1859.

The agent for Photographs reports that the demand for these works by the public has far exceeded the power of production, owing in some measure to the summer of 1860 being unfavourable for printing operations. We have considered how far the assistance of private photographers can be employed in printing and publishing photographs of objects in the Museum the property of the public, without granting a monopoly to any one photographer. We have caused negatives to be made of Turner's work, entitled the "*Liber Studiorum*," and as an experiment have invited photographers to purchase these negatives at cost price. The purchaser will produce the work on his own responsibility and at his own risk, the Department of Science and Art reserving the liberty to sell other negatives of the same work, if the public call for better or cheaper impressions. On these terms an established firm has agreed to publish them.

In the *Educational Division* a considerable advance has been made. A new reading-room was opened in June 1860, and the attendance has increased with the facilities afforded. 1,600 volumes have been added to the Library in the course of the year. (Appendix N., p. 130.)

The additions to the *Food and Animal Products* Collections have been both numerous and interesting. (Appendix N., p. 132.) The Superintendent, Dr. Lankester, has reported specially on the subjects to which his attention has been directed. (Appendix O., p. 134.)

The collection of materials used in building has been increased by upwards of 800 specimens, and has proved of great use to architects and builders. Additional space is very much required. (Appendix P., p. 139.)

The number of visitors to the Museum in 1860 shows a large increase over the return of the previous year. 610,696 persons have visited the Collections, against 475,365 in 1859. Since the 28th May 1860, the Museum has been opened from 10 a.m. to 10 p.m. on the three first days in the week.

Courses of Lectures, delivered to the public, have been delivered on Science Instruction, on Food, on Botany, on

Animal Products, on Anatomy, and on the Elements and Principles of Ornament. (Appendix R., p. 145.)

III.—INSTITUTIONS SUBJECT TO THE SUPERINTENDENCE OF THE DEPARTMENT.

The progress of the *Geological Survey* during the past year is reported by Sir Roderick Murchison (Appendix S., p. 154.) 1,526 square miles have been surveyed in Great Britain during the year, and 730 in Ireland. These numbers are less than in 1859, the surveyors having been partly employed in preparing descriptive memoirs of surveys made in previous years. The sale of maps has largely increased, showing that the public appreciate in a greater degree the information these maps supply.

The *Museum of Practical Geology* was visited in 1860 by 25,029 persons, against 25,309 in 1859. Considerable additions have been made to the Collections during the year.

The *Chemical Laboratory* in the *School of Mines* has been attended by 108 students, against 128 in 1859, and the *Metallurgical* by 27 against 18 in 1859.

Sir Robert Kane reports upon the *Museum of Irish Industry*; the total number of visitors has been 32,999 against 36,657 in the previous year. (Appendix T., p. 169.)

The report of the *Royal Dublin Society* records the proceedings of its various departments, including the Botanic Gardens of Glasnevin, the Cattle Shows, its natural history collection, and agricultural museums, &c. The gardens were visited in 1860 by 39,443 persons, against 41,356 in 1859. (Appendix U., p. 176.)

A strong representation has been made to the Government in favour of the opening of these gardens to the public as freely as those at Kew. His Excellency the Lord Lieutenant recommends the opening, but the alteration is opposed by the Royal Dublin Society, and the subject is still under consideration. The number of persons attending the whole of the Divisions of the Royal Dublin Society, including gardens and lectures, in 1860 was 111,360. In 1859 the number was 108,273.

The *Royal Zoological Society* of Ireland report a slight falling off in the attendance; the Gardens being visited in 1860 by 143,310 persons, against 158,282 in 1859. (Appendix V., p. 184.)

The *Committee of Lectures* in Ireland furnish a report of their proceedings during the past year. (Appendix W., p. 185.)

The *Industrial Museum of Scotland* is now under the charge of Professor T. C. Archer, who was appointed Superintendent on the 15th May 1860. The additions made to the Collections in the course of the year have been considerable, but this Museum cannot receive any great development until the new building in Argyle Square is completed, and the industrial collections will be the first objects to be removed into it. (Appendix X., p. 189.)

The Regius Keeper of the *Natural History Collections in Edinburgh* reports that, in 1860, 83,314 persons visited the Museum, against 88,350 in 1859. (Appendix Y., p. 198.)

The Statement of the Expenditure of the several divisions of the Science and Art Department for the year ending 31st March 1861 is given in the Appendix Z., p. 202.

All which is most humbly submitted.

South Kensington, this 12th day of May 1861.

(Signed) GRANVILLE.
ROBERT LOWE.

MINUTES.

APPENDIX (A.)

At South Kensington, the 3rd day of May 1860.

Appendix A.

By the Right Honourable the Lords of the Committee of Her Majesty's most Honourable Privy Council on Education. MINUTES.

Prizes for Slate Drawing.

Read, a Minute dated the 5th January 1855, relative to the rewards distributed by Art-masters for drawing on slates to children in Public Schools. Prizes for slate drawing.

Resolved, to cancel that Minute, and to substitute the following :—

1. The Science and Art Department gives prizes for drawing on slates to children of Public Schools in connexion with the Committee of Council.

2. Such schools must receive instruction in drawing from the Master of the School of Art, or under his inspection from an Art Pupil-teacher, or from their own Master when holding a drawing certificate. In the last two cases the Art-master must himself visit the School to superintend the instruction at certain periods.

3. The prizes will be awarded by the Masters in charge of Local Schools of Art, at an examination to be held annually by them in each Public School.

4. Two prizes will be furnished to the Art-master for every school receiving drawing instruction in accordance with the above conditions. These prizes will be awarded by him among the children examined, as he may judge best. The result of his awards is to be reported to the Department.

5. In the month of May of each year, the Art-master will make a requisition to the Department for the prizes, to which the number of Public Schools returned in the last annual report from the School of Art, as being taught by him, or under his superintendence, entitles him. The requisition will be made on a special form which must be signed by the Secretary of the School.

6. The requisition having been approved by the Department, the prizes will be forwarded at once, in order that the Art-master may be enabled to hold the local examination at any time during the year that he may think proper, and award the prizes himself on the spot. He should report the result as shortly as possible after his awards of the year have been completed.

At South Kensington, the 23rd day of August 1860.

By the Right Honourable the Lords of the Committee of Her Majesty's most Honourable Privy Council on Education.

Schools of Art.

Schools of Art.

My Lords refer to the list of those towns in the United Kingdom in which Schools of Art have been established.

They find that several of these places, with a population of less than 15,000 persons, have been able, with the aid which the Department is

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Appendix A. authorized to afford, to support a School of Art, by which all classes may receive elementary instruction in Art.

MINUTES.

Their Lordships have before them a list of towns having a population exceeding 15,000 persons in which no Schools of Art have been established, and where the artizans do not at present enjoy the benefit of the advantages which are to be obtained in those localities which support a School of Art in connexion with the Science and Art Department.

Transmit to the Managers of Schools and others in these towns a copy of the Art Directory; point out the general conditions under which a School of Art can be established; also call attention to the conditions under which, by a local union of existing schools, the services of an Art Master certificated by the Department can be obtained to teach drawing in those localities where a special School of Art could not be successfully supported (see Directory, p. 14, ¶ 2); also inform them that in localities in which neither of the above plans is feasible, but where the teaching of drawing can be instituted and carried on by teachers in schools for the poor, the Department is prepared to conduct an annual examination in drawing and to give rewards for the attainment of a certain standard of proficiency provided that 50 persons (children, adults, artizans, &c.) are willing to present themselves at it (see Directory, p. 58).

Should there be any special circumstances in any place which would render a personal conference with an Officer of the Department desirable, My Lords will direct an Inspector to visit such place and give assistance to those persons who may be anxious to avail themselves of the advantage held out by the Department to artizans and others.

LIST OF TOWNS having more than 15,000 Inhabitants in which no School of Art or Drawing Union has been established and no Examination in Drawing held.

NAME OF TOWN.	Popula- tion.	NAME OF TOWN.	Popula- tion.
Ashton-under-Lyne -	29,791	Leamington (Priors) -	15,724
Berwick-upon-Tweed -	15,094	Lincoln -	17,536
Blackburn -	46,536	Maidstone -	20,801
Boston -	17,518	Merthyr-Tydvil -	63,080
Bury (Lancashire) -	31,262	Newport (Monmouth) -	19,710
Canterbury -	18,398	Northampton -	26,657
Cardiff -	18,351	Oldham -	52,820
Chatham -	28,424	Perth -	23,835
Colchester -	19,443	Portsmouth -	72,096
Colne -	21,764	Shrewsbury -	19,691
Cricklade -	35,503	South Shields -	28,974
Derby -	40,609	Stockport -	53,835
Dover -	22,244	Stroud -	36,535
Gravesend -	16,633	Sunderland -	67,394
Hastings -	17,011	Wakefield -	22,057
Hull -	84,690	Walsall -	25,680
Kidderminster -	18,462	Wareham and Purbeck -	17,378
Kilmarnock -	21,443	Whitehaven -	18,916
Kings Lynn -	19,355	Wigan -	31,941

At South Kensington, the 14th day of July 1859.

By the Right Honourable the Lords of Her Majesty's most Honourable Privy Council on Education.

Aid to Navigation Instruction.

Aid to navigation instruction.

I. My Lords having renewed their consideration of Captain Ryder's Report on Navigation Schools, and approved generally of the same,

proceed to revise the scale of augmentation grants, and in place of Captain Ryder's suggestion of two augmentation grants consisting of a fixed payment and group money (p. 32), will adopt one increased scale of augmentation grant. •

Appendix A
MINUTES.

II. My Lords consider that basing the certificates of Navigation Masters on the first four groups of subjects of knowledge specified in the Minute of the 25th February 1856, augmentation grants of three classes, applicable to the Head-master, 1st Assistant, and 2nd Assistant-master, with three grades of competency in each class should be adopted: that the passing in all four groups, viz.: 1, a general acquaintance with mathematics; 2, general navigation and nautical astronomy; 3, adjustment and skilful handling of instruments; and 4, physical geography, should be necessary for the appointment of a Head-master of a Navigation School; that the passing in the first three, or in the 1st, 2nd, and 4th, should be necessary for the appointment of 1st Assistant, and that the passing in the first two should be necessary for the appointment of 2nd Assistant.

III. The following augmentation grants of three grades in each class will be granted:—

	1st grade.	2nd grade.	3rd grade.
Head-master	£120	£100	£80
1st Assistant	80	70	60
2nd Assistant	60	50	40

The augmentation grant of a Head-master will only be allowed when the Master is actually acting as Head-master of a school with an assistant under him.

The grade of the augmentation grant allowed to the Master in each of the three classes of Head-master, 1st Assistant, or 2nd Assistant will depend on the manner in which he passes his examination and the certificate he takes. A rise of one grade will occasionally be made when from great zeal and ability in the management of a school, a Master is especially recommended for the same by the Inspector. That is to say a Head-master or a 1st or 2nd Assistant holding a 2nd grade certificate, may, if specially recommended, receive the 1st grade augmentation allowance; or in the same manner holding a 3rd grade certificate receive the 2nd grade allowance.

IV. No candidate will be admitted to examination who has not a certificate of the Committee of Privy Council on Education, or failing this, shall pass a special examination as an elementary teacher.

Any teacher holding a certificate of competency to give primary instruction will receive from the Science and Art Department, a sum equal to the augmentation grant which has been attached to such certificate, in addition to the grants above-mentioned.

V. As respects group 5, physics, mechanics, and the steam engine; 6, chemistry; 7, natural history; 8, chart, freehand, and mechanical drawing; the payments will be governed by the General Science Minute of the 2nd June 1859 (sec. 5).

VI. Pupil-teachers will be allowed at the rate of one to thirty boys in the school, and will receive 20*l.* per annum each, and the Master 6*l.* per annum for their instruction on condition of their general progress being favourably reported on by the Inspector.

VII. There will also be given on results the further payments to Masters, and Queen's prizes, according to the scale fixed by the General Science Minute (sec. 9) of the 2nd June 1859.

VIII. The examinations will take place in London, or elsewhere, in January and July in each year.

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Appendix A. IX. Candidates who are desirous of passing such examinations must forward to the Secretary of the Department their names and the numbers of the groups in which they propose to be examined, at least three weeks before the day of examination.

MINUTES.

X. The examination will be conducted by examiners appointed from time to time by the Department, and will be both oral and by written exercises: actual observations must be made with instruments, a skilful manipulation of which will be required. The teaching powers of the candidate will also be examined.

XI. Examinations will continue to be taken separately in each of the four groups (sec. 2), the passing in one or more of which, at one examination, will be registered towards the certificate of the candidate—who may come up at the next or any following examination to pass in the remainder; or in those in which he failed; or to take a higher class certificate in the groups in which he has already passed.

GROUP I.—*General Acquaintance with Mathematics.*

The first group is with the view of ascertaining whether, in addition to the elementary course of mathematics, arithmetic, algebra, geometry, mensuration, &c., the teacher possesses an acquaintance with plane and spherical trigonometry, the theory of logarithms and their practical use in computation, so far as these are needful for the purposes of navigation. Unless this group be covered by the certificate of the Committee of Privy Council or is passed satisfactorily the examination of the candidate for the other groups will not proceed.

GROUP II.—1. *General Navigation.*

The following subjects will be included in the examination:—

a. The application of the laws of magnetism to compasses on shipboard, with the various methods of measuring the amount of local deviation, and the application of the numerical corrections for leeway, variation, and deviation.

b. The principles on which various charts are made, especially Mercator's chart and its advantages over other projections for the purposes of navigation. Skill must be shown in pricking off a ship's place from observed bearings, and from latitude and longitude.

c. The candidates must possess a knowledge of the methods known as traverse and current sailing; middle latitude, parallel, Mercator's, composite and great circle sailing, and be able to do a day's work complete, and solve all the problems in the Board of Trade examination of masters and mates.

d. The candidate must be well practised in the actual calculations of the problems of navigation, and must show considerable powers as an expert and accurate computer.

e. The candidate must also have skill in the solution of problems relating to marine surveying.

2. *Nautical Astronomy.*

The amount of knowledge required under this head will include:—

a. A thorough acquaintance with the sextant, artificial horizon, prismatic compass, and chronometer; and with respect to the chronometer, the candidate must be able to take and compute the necessary observations for determining its error and rate, with the methods of deducing from it accurate rates and correct intervals of mean, apparent, and sidereal time.

b. The methods of finding the latitude by astronomical observations, including—

1. Meridian altitude above and below pole of sun, moon, star, or planet.
2. By the altitude of Polaris at any time.
3. By altitudes of any celestial body near its upper or lower transit over the meridian.
4. By double altitude.
5. By single altitude (out of the meridian).

c. The methods of computing the variation of the compass from the observed azimuth or amplitude of a heavenly body. Appendix A.

d. To find the longitude by a chronometer, and by lunar observations, with the method of computing the altitudes of the sun, moon, and star, and the method of allowing for the spheroidal figure of the earth. MINUTES.

e. The method of finding the latitude and longitude, from two observations known as Sumner's method, and also the direct solution of the same problem by spherical trigonometry.

f. The general elements of nautical surveying.

g. A thorough knowledge of the meaning of all the astronomical terms used in nautical astronomy; and of the nature of the various corrections used in and modes of investigating all the rules employed.

In working the problems in this group, order and methodical arrangement in the practical working will be especially insisted upon.

GROUP III.—3. *Practical Use of Instruments.*

The instruments included in this group will be—(1) Those usually employed, such as quadrants, sextants, chronometers, barometers, sympiesometers, aneroids, and thermometers. (2) Those used for scientific purposes connected with marine surveying and meteorology, as artificial horizons, theodolites, levelling staves, dip and intensity needles, hygrometers, and wet bulb thermometers and hydrometers.

This group cannot be passed until certificates have been taken for Groups I. and II.

GROUP IV.—*Physical Geography.*

The knowledge included in this group embraces—

a. A general acquaintance with astronomy, so far as it relates to terrestrial phenomena.

b. Distribution of the land and water; forms of the great continents; the general structure of land with regard to mountains, table-lands, plains, deserts, islands, &c.

c. The ocean; its physical and chemical characters, temperature, depth, waves, tides, tidal bore, progress of the tide wave, ocean currents, and soundings.

d. Inland waters, including the phenomena of springs, rivers, lakes, and influence of the distribution of inland waters upon commerce.

e. Climate; physical causes which determine climate, isothermal lines, and temperature tables.

f. Winds, including land and sea breezes, trade winds, variable winds, law of storms, cyclones, &c.

g. Information on the physical geography of the British and Colonial Empire of Great Britain, with especial reference to exports and imports.

The candidate must be prepared to give a lesson on any of these subjects to a class before the examiners.

This group can only be passed after certificates for groups I. and II. have been obtained.

At South Kensington, the 29th day of March 1860.

By the Right Honourable the Lords of Her Majesty's most Honourable Privy Council on Education.

Local Committees for Science Schools and Classes.

1. A local Committee of not less than five well-known and responsible persons must be formed in connexion with every Science Class, in order to comply with the necessary requirements of the Science and Art Department, and to carry out various arrangements on its behalf, necessary for testing the efficiency of the Science Instruction, on the proof of which alone the aid of the Department is given.

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Appendix A

MINUTES.

2. The gentlemen proposed to act on this Committee are to fill in the form No. 88, stating their willingness to carry out the necessary arrangements for examinations, &c., and giving the address and occupation of each member.

3. The relation of the Committee to the teacher of a Science School or Class will vary much according to the different circumstances of various localities. In some places where the demand for Science Instruction is great, and there is an energetic local teacher to take advantage of it, the chief duty of the local Committee would be to give the teacher the necessary certificate for obtaining his payments. While in other places where those who take an interest in and wish to further Science Instruction, may, with that object, subscribe to and establish Science Classes either in connexion with an existing institution or not, and may engage a teacher certificated in Science to instruct the classes, the teacher must, to a great extent, be the officer of the Committee. With these local arrangements the Science and Art Department does not interfere, but leaves them to the locality to settle. The local circumstances will determine whether, as in the first case, the master receiving the whole of the fees for instruction should provide at his risk the room for instruction with the necessary firing, lighting, &c., or what, as in the second case, should be the proportion of the fees deducted on this account by the Committee.

4. The Science and Art Department requires that the local Committee shall,—

- a. Be responsible for the safe custody of all apparatus towards the purchase of which public funds have contributed 50 per cent.
- b. That they shall provide a room or rooms of sufficient size to carry out the annual examination according to the detailed regulations under that head, which will be issued. This examination is of all persons who wish to present themselves, and not only of those taught by the certificated teacher; such persons must send in their names before 1st March, and pay a registration fee of 2s. 6d. for the whole examination.
- c. That they shall send in to the Secretary of the Science and Art Department the list of students to be examined, before the end of March, specifying the subjects in which they are to be examined. Should no officer of the Science and Art Department be present for conducting and superintending, they will be held responsible for giving out the examination papers which will be sent for that purpose; for seeing them worked fairly and certifying to the same, not less than three of the Committee being always present; for sending the worked papers, under seal by the day's post to the Secretary of the Science and Art Department.
- d. That they shall certify firstly, that those students on whose examination the teacher bases his claim to the certificate allowance and payments on result, are artizans or operatives, or their children of above 12 years of age; and secondly, that they have received 40 lessons at least from the teacher in the year.* Under the head of artizan or operative may be included all persons receiving weekly or daily wages.

5. The Science School or Class must be at all times open to the visit and inspection of the officers of the Science and Art Department as a

* To carry this out it will be necessary for the teacher to keep, for the Committee, an attendance book, in which he must enter the names of every artizan attending his lessons on each day.

condition of the grant of aid from it; if at any time it is found that the apparatus, &c., towards the purchase of which a grant has been made is not properly taken care of, or that a proper room with firing, lighting, &c., is not provided for the class, the aid of the Department will be withdrawn.

Appendix A.
MINUTES.

At South Kensington, the 6th day of December 1860.

By the Right Honourable the Lords of Her Majesty's most Honourable Privy Council on Education.

Interpretation Minute on Minute of the 14th July 1859.

1. Any master certificated in navigation according to this Minute may earn the certificate allowance according to the grades there fixed in the following way. Aid to navigation instruction.

2. He will receive payment,—1st for boys who having been taught by him for not less than one year are examined by the Navigation Inspector and finally proved to have been apprenticed on board a merchant vessel, or entered on board a man-of-war; 2nd for seamen, masters, or mates, who having received 20 lessons at least from the master, pass an examination at the Local Marine Board for a higher certificate.

3. The payments under the first head will be at the rate of 6*l.*, 4*l.*, or 2*l.*, for each boy, according to the result of the examination. The payments under the second head will be at the rate of 1*l.* per head.

4. But the total payments under these heads can never exceed the amount which the teacher is qualified to earn by the grade of his certificates.

5. A Local Committee of not less than five responsible persons must be formed to give the teacher the necessary certificates.

6. A room with firing, lighting, &c., must be provided to give instruction in.

At South Kensington, the 6th day of December 1860.

By the Right Honourable the Lords of Her Majesty's most Honourable Privy Council on Education.

Science Instruction.—Navigation.

1. Evening Navigation Classes may be established independent of (day) Navigation Schools. Navigation.

2. An examination will be held once a year at South Kensington, at which any person may present himself by registering his name to be examined for an Evening Navigation School Certificate, or if he prefers it, he may present himself for examination by the Inspector of Navigation Schools when he visits any of the existing Schools on his tour of inspection. On giving information to the Science and Art Department of his intention to do so, he will be informed of the date of the Inspector's visit.

3. This certificate will be of three grades, qualifying the holder to earn 20*l.*, 15*l.*, or 10*l.*, according to the grade of the certificate. And further payments on results dependent on the results of instruction only.

4. The certificated allowance will depend on the average number of bonâ fide Sailors—Seamen and Apprentices—who attend during 200 evenings in the year, and will be paid at the rate of 10*s.* per head of the average up to the maximum which the teacher is qualified to earn by the grade of his certificate. The payments on results, which are unlimited, are dependent on the number of prizes taken by the pupils when

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Appendix A. examined by the Inspector, and will be at the rate of 5s., 10s., and 1l., according to the grade of the prize.

MINUTES.

5. A responsible Committee of not less than five persons must be formed to give the Master the requisite certificates.

6. A proper room, with firing, lighting, &c., must be provided for giving instruction in. When these conditions are fulfilled any persons holding the Evening Navigation Class Certificate may obtain the above payments.

At South Kensington, the 29th day of November 1860.

By the Right Honourable the Lords of the Committee of Her Majesty's most Honourable Privy Council on Education.

My Lords have received several applications from the Managers of Science Classes requesting them to consider Professors in Universities, and others who have undertaken to teach their classes, as certificated without their being examined; and to treat their classes as if taught by a certificated teacher, on the ground that the position and well-known acquirements of these gentlemen is a guarantee sufficient to warrant their examination being dispensed with.

My Lords wishing to give every facility to able teachers in the diffusion of scientific information, will when they see fit, refer all such applications to (1) the Examiner for the time being in the Science in which the applicant is to give instruction, (2) the Secretary of the Science and Art Department, and (3) the Science Inspector, who will report to my Lords if the applicant by his age, position, office, or otherwise, is a person who might reasonably object to undergo an examination—if so, whether, by having taken degrees, published works, made original researches, or by any other evidence he has satisfied them of his competence, and justified them in recommending that an examination be dispensed with.

In order to assist the Committee in forming an opinion, the applicant will furnish a statement of the points on which he bases his claim for exemption.

If the report is favourable, my Lords will grant an Honorary 1st Grade Diploma, which will carry with it the privileges of a 1st Grade Certificate.

My Lords desire these cases to be viewed as exceptional, considering that the proper proof of competency is the being able to pass the usual examination.

DOCUMENTS RELATING TO SCIENCE ADMINISTRATION.

APPENDIX B.

REPORT of CAPTAIN DONNELLY, R.E., on SCIENCE and NAVIGATION SCHOOLS. Appendix B.

CAPTAIN
DONNELLY'S
REPORT.

DURING the past year the new system of aid to science instruction has come into full operation. The aid to Science Schools existing in 1859 was allowed to continue on the old system till the end of last year, 1860, but since the 1st January 1861 the quarterly payments, &c. have ceased, and the system of payments on results alone has been applied to old and new schools alike.

In May will take place the first general science examination. Though it will not be till then that the full machinery of the Science Directory will come into force, yet as examinations have taken place at some few places under the new system, where teachers certificated under the Science Minute of 2nd June 1859 have opened classes, I may mention them in some detail, as giving a good indication of the working of the regulations of the Science Directory. The first class I inspected and examined which had been opened under it was the Science class in connexion with the Glasgow Secular School. This was in June 1860. The Glasgow Secular School does not receive aid from Government as a poor school. There are about 200 boys and girls taught in it. Science (human physiology) had for some years formed a portion of the instruction. The principal part of the scientific instruction was given to the first class, though some was also given in the form of subject lessons to the others. The head master, Mr. Mayer, came up for a certificate in Chemistry in November 1859. He obtained a certificate of the third grade in Inorganic Chemistry, and of the second grade in Organic Chemistry. In order the better to comply with the conditions of the Science Directory, and to obtain the payments of the Department, a special science class was formed, meeting in the evenings, and consisting of the most advanced boys in the school, and also of some who, having left the school, are in employment in the town.

Twelve boys came up for examination; two obtained 1st class Queen's prizes (one of these, who had left the school, was an errand boy in a newspaper office), three obtained 2nd class Queen's prizes, one a 3rd class prize. Besides these, three passed satisfactorily, and only three failed. The examination was therefore very successful, peculiarly so, when the short time that all the arrangements, &c. had to be made in is taken into consideration. A good deal of interest appeared to be taken in the subject of science instruction by various teachers in the neighbourhood, from which I should infer that other classes would soon be opened.

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The next classes examined, the first in England under the new system, were those at Huddersfield. These I inspected on the 24th November 1860. The result of this examination is perhaps more important and interesting, as being more directly an experiment under the new system than was the case with the Glasgow Secular School, which was a school for boys in which science had been taught for some years, though, indeed, some of the pupils were young men who had left the school, but attended the evening classes. The head-quarters, if I may so term them, of the Huddersfield science classes are at the Literary and Scientific Institution. In connexion with this institution, four or five years ago classes were established, and instruction given in Chemistry, Natural History, &c., partly by Mr. Rhodes, a surgeon in Huddersfield, and secretary of the present classes, and partly by Mr. Jarman, the present certificated teacher, and by others. These classes had, however, soon begun to dwindle down, till, in 1859, they could hardly be said to exist. In November 1859 Mr. Jarman came up and took a certificate in Chemistry. He then, being the head master of an elementary school some two miles out of Huddersfield, obtained permission, in order to comply with the regulations of the Education Department, to transfer his pupil-teachers to the second certificated teacher. Being an energetic man, backed by a good committee, and having the prospect of Government prizes to hold out to the pupils, while at the same time he was stimulated by the knowledge that his payments would be exactly proportioned to his success, he soon, not only resuscitated the Huddersfield classes, but established branch classes in the neighbourhood. At the time of my visit he had upwards of 70 students under instruction, besides the pupils of a grammar school where he taught. Of these he brought up 23 as fit for examination; all except one passed a creditable examination; five took first grade Queen's prizes, one took a second grade, five third grade prizes.

- I may here give the payments to Mr. Jarman as an illustration of the manner in which the payments are earned. He was qualified to earn by his first grade certificate in Chemistry 20*l.*, and in addition, by his Education Department certificate, 27*l.* 10*s.*; total, 47*l.* 10*s.* To obtain this, it was necessary that 12 of his pupils, being artisans or their sons of above 12 years of age, should pass the examination. More than 12 passed, and in addition he earned 17*l.* by the Queen's prizes taken by them, so that the total payment was 64*l.* 10*s.* Some of this amount may be fairly considered due to the instruction given in former years.

At Halifax I inspected science classes taught by Mr. Noble, who had obtained a first grade certificate in Inorganic Chemistry. Fifteen students (all who came up), "passed"; three first grade prizes were awarded, five second grade, and two third grade.

These, with the Science Schools existing under the former regulations, viz., at Aberdeen, Birmingham, Bristol (a Trade School and a Mining School), and Wigan, of which the detailed reports will be seen in the Appendix, are the only Science School classes which have been examined and inspected this year by the Science and Art Department.

I will now revert to the working of the system of the Science Directory. Last November took place the second examination of teachers for certificates. The provisions of the Science Directory, that is to say, the conditions under which alone payments would be made were fully known, and the result has been eminently successful. Various restrictions have been imposed since the last examination, such, for instance, as the certificated teachers of elementary schools who had pupil-teachers apprenticed to them not being permitted to earn the science certificate allowance. This, of course, would naturally largely reduce the list of competitors, so that the great increase, not only of

competitors, but also of successful ones, is the more remarkable. In November 1859, 57 candidates came up. There were 115 entries for subdivisinal certificates (there were then only 12 subdivisions of subjects); 43 candidates were successful, and 66 subdivisinal certificates taken, 14 first grade, 20 second grade, and 32 third grade. This last year (1860) 89 candidates came up; there were 13 subdivisions of subjects, and there were 170 entries for subdivisinal certificates; 75 candidates were successful, and 121 subdivisinal certificates were taken, 22 first grade, 44 second grade, 55 third grade, showing a very large increase; an increase in the year (though no attempt had been made to make the subject generally known), of 60 per cent. on the number of candidates, and nearly 100 per cent. in the certificates taken, though the examination was more difficult.

Appendix B.
CAPTAIN
DONNELLY'S
REPORT.

TABLE showing the NUMBER OF ENTRIES for EXAMINATION for SCIENCE CERTIFICATES in 1859 and 1860.

	Subdivision.	1859.						1860.						
		No. of Entries.	No. of Successes.	No. of Failures.	No. of 1st Grade.	No. of 2nd Grade.	No. of 3rd Grade.	No. of Entries.	No. of Successes.	No. of Failures.	No. of 1st Grade.	No. of 2nd Grade.	No. of 3rd Grade.	
<i>Subject I.</i>														
Geometrical Drawing, Machine Drawing, and Building Construction	I.	9	0	9	0	0	0	6	5	1	2	2	1	
	II.	5	1	4	0	1	0	7	2	5	0	1	1	
	III.	6	2	4	0	1	1	4	1	3	0	0	1	
<i>Subject II.</i>														
Mechanical Physics	I.	Not recognised; added since.						16	12	4	1	6	5	
	II.	12	7	5	0	2	5	10	3	7	0	0	3	
<i>Subject III.</i>														
Experimental Physics	I.	11	5	6	1	2	2	21	13	5	2	3	8	
	II.	11	5	6	1	2	2	25	14	11	7	5	2	
<i>Subject IV.</i>														
Chemistry	I.	37	30	7	4	7	19	47	42	5	2	18	22	
	II.	16	12	4	5	4	3	20	17	3	3	6	8	
<i>Subject V.</i>														
Geology and Mineralogy	I.	3	2	1	1	1	2	5	5	0	1	2	2	
	II.	2	1	1	1	0	1	6	4	2	3	0	1	
<i>Subject VI.</i>														
Natural History	I.	1	0	1	0	0	0	2	2	0	1	0	1	
	II.	2	1	1	1	0	0	1	1	0	0	1	0	
Totals		12	115	66	43	14	20	32	170	121	40	22	44	50

The only falling off, it will be seen from the foregoing table, was in the number of candidates in Subject I., Practical Plane, and Descriptive Geometry, and last year no certificates were taken in this subject, or at least the first subdivision of it, the Practical Plane, and Descriptive Geometry, and the larger number of candidates on that occasion may be accounted for, as I stated in my last report, by the slight acquaintance there was in the country of the subject, so slight, in fact, that the candidates were not aware of the nature of the subject in which they were to be examined.

This year, though there were fewer candidates, five were successful; one of these had come up before, had been unsuccessful, and had studied the subject, seeing the nature of it from the examination, during the

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Appendix B. intermediate time; another, who had not tried before, had worked up the subject by himself during this time; and so again, on comparing the list which I have given, Appendix C., of successful candidates with the list of last year, it will be seen that many who had come up last year and obtained a second or third grade certificate had continued their studies and obtained higher grade certificates, while others, who had failed, have now succeeded. These are most satisfactory proofs that the conditions offered are such as to stimulate men to acquire the necessary information for themselves, and that opportunities exist through various institutions for acquiring it, without the aid of Government in providing training classes, &c., though at the same time, the difficulty of obtaining the necessary information is fully illustrated by the following analysis of the successful candidates at this examination.

CAPTAIN
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	No. of Candidates.	Certificates.			Total.
		1st	2nd	3rd	
From School of Mines, Jermyn Street	7	7	5	2	14
From Training Colleges -	51	6	28	38	72
From other Schools, &c. (or private study) -	31	7	13	17	37

This difficulty will, of course, decrease as the centres for acquiring scientific knowledge by the establishment of science classes increase.

The professors at Jermyn Street have already, as will be seen from the report of Sir R. Murchison, established special courses to meet the wants of teachers preparing for the certificates of this Department, with eminent success, and I have no doubt that other institutions in large towns will follow the example. A course of lectures on the best method of preparing for certificates and teaching a class was given by the following gentlemen,—

Subject I. - Geometrical Drawing, &c. Prof. T. Bradley.
 Subject II. - Mechanical Physics - Rev. B. M. Cowie, M.A.
 Subject III. - Experimental Physics - Prof. Tyndall, F.R.S.
 Subject IV. - Chemistry - Prof. Hofmann, F.R.S.
 Subject V. - Geology - Prof. Ramsay, F.R.S.
 Mineralogy, &c. - Prof. W. W. Smyth, F.R.S.
 Subject VI. - Zoology - Prof. Huxley, F.R.S.
 Subject VII. Botany - Dr. E. Lankester, M.D., F.R.S.
 Navigation and Nautical Astronomy - J. Riddle, F.R.A.S.
 Physical Geography - Dr. G. Kinkel, F.R.G.S.

These lectures will, I have no doubt, be of great service, and the eminence of the authors is a guarantee of their value. That they are fully appreciated is shown, not only by the large attendance of teachers, (See Appendix R., p. 145) but also by the large demand for those lectures which have been published.

Classes have been established under certificated teachers at the following places since the publication of and under the provisions of the new Science Directory:—Accrington, Banbury, Bristol, a mining school, Dedham, Edinburgh, Glasgow, Gloucester, Halifax, Haslingden, Hollinwood, Huddersfield, London 7 (London Mechanics' Institution, Chelsea Athenæum, Barking Athenæum, Lambeth, Highgate, Poplar Trade School, Birkbeck School, Bethnal Green), Manchester 3 classes, Middlesboro' on Tees, Painswick and Upton St. Leonard's, Slough. There are also classes in connexion with the Miners' Association of

Cornwall and Devon, and classes in connexion with the Lancashire and Cheshire Association of Mechanics' Institutions. At these places the classes are far enough advanced to apply for the examination of the Department in May. Classes at the following places, though not under certificated teachers, have also applied for the examination of the Department of Science and Art:—Manchester Mechanics' Institute, Calne, and Andersonian University.

Appendix:
CAPTAIN
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REPORT

1,340 papers will be given out at the May examination. This, however, does not give the precise number of candidates who have registered their names for examination, as some may have put down their names in more than one subject.

There has been no difficulty experienced in getting the influential men in different localities to respond to the call of the Department for their aid in conducting the examinations.

It is greatly in favour of the success of this system that, though there has been this rapid development, it has been wholly through the knowledge acquired by the localities; no attempt has been made to press it forward. The system under which Government aid is given is so new that each step has been considered experimental, and therefore not forced on. The further development, however, will be on a much greater scale. Complaints are numerous that the information of the aid of the Department is not more widely made known. The conditions are considered so easily applicable to the varying requirements of different localities, the requirements and interference of the Department so definite, and yet so little vexatious, and the need for science instruction so greatly felt, that, many places having applied for an officer of the Department to attend a public meeting and explain the proceedings of the Department, a certificated teacher, Mr. Buckmaster, has been permitted to attend them, and explain the provisions of the Science Directory. He has, at the request of the Committee of the Yorkshire Union of Mechanics' Institutes, addressed large public meetings at the following places,—Leeds, Halifax, Bradford, Huddersfield, Dewsbury, York, Hull, Middlesborough, Ripon, Wakefield, Sheffield; and, as far as I can judge, there appears every probability of additional classes being at once established, which will at least take advantage of the examination of the Department.

This leads me to another point. As it is not necessary for classes to be under a certificated teacher, to be examined by and receive the prizes of the Department, though a great stimulus may be given to their operations by the proffered prizes, it will be at small cost to the Government, and examinations will be held in May, as I before stated, at the Andersonian University, Glasgow, Manchester Mechanics' Institution, and the Middle School, Calne, where the teachers are not certificated, and where the only payments will be for prizes, &c. taken by the students, to whom, nevertheless, this will be a great stimulus.

I should not omit to mention that examinations under the rules of the Department have taken place at the following middle class schools, which will, I have no doubt, avail themselves in future largely of this examination:—

City of London School.
Dr. Wilson's School, Brixton Hill.
Oxford House School, Chelsea.

The examination at the City of London school in chemistry was very successful. One first grade, four second, and four third grade prizes were obtained by the candidates, who studied chemistry in a special class after school hours. The authorities of the school have now introduced science as a regular branch of instruction throughout the school. This

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Appendix B. change has prevented any class being ready for this year's examination, but I have no doubt a large one will come forward next year.

CAPTAIN
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REPORT. I come now to the Navigation Schools, an accurate return of them will be found in Appendix C. 2, with a list of the candidates who have obtained prizes.

The success of the system of payment on results was so clearly shown by the experiment on Science Schools and Classes that having been directed in conjunction with Captain Ryder, R.N., the then Inspector of Navigation schools, to prepare a report on "the manner of making the augmentation grants dependent on the results of instruction afforded," we sent in the following:—

REPORT of Captain RYDER, R.N., and Captain DONNELLY, R.E., drawn up in compliance with the Minute of the 19th April 1860.

MY LORDS,

IN bringing the following Report before your Lordships on "the manner of making the augmentation grants dependent on the results of instruction afforded," it is necessary to remark that the following considerations were borne in mind in framing the suggestions.

Payments on results are at present awarded, but only in those schools where there are boys; and they are in addition to the augmentation grant. They are small in amount, but sufficient to create emulation among the masters, owing to the scheme according to which they are awarded. The plan has only just been adopted.

The amount of the augmentation grant has been re-arranged and promulgated within the last few months; and the effect of the Minute of July 1859 cannot yet be judged of fairly. Navigation masters can command large salaries elsewhere, and we have learnt in the case of Mr. Bolt and others, that their services are not easily secured; we have therefore recommended as little disturbance as possible of the Minute of July 1859 so soon after its enactment, from the fear that it would have an unsettling and bad effect on the schools. And we recommend, instead of any change so radical as that of making the amount of the augmentation grant a variable quantity, and dependent on the success of teaching in each year, that a circular be sent round naming the minimum amount of work which their Lordships consider ought to be performed by each master, and which if not performed would lead their Lordships to take into consideration the propriety of withdrawing aid from the school.

Work that should be performed at Navigation Schools:—

1. In at least one Navigation School at each seaport of any size (sending 30 apprentices to sea annually as first entries, and of such seaports there are 28 in the United Kingdom), there should be an Evening School for apprentices, at which, as a general rule, there should be an average attendance of at least five apprentices for five nights in each week during nine months in the year for each master attached to such Navigation School.

2. At schools where boys only are taught (Hull, for instance), and there are no adults, at least 20 boys who have studied on an average for at least 12 months each should be shipped annually, for each master employed at the school. If the boys remain on an average for two years, then 15 boys; if three years, then 10 boys; if four years, then five boys for each master.

3. At schools where there are adults only, as at Aberdeen and Glasgow, the number of adults prepared for examination before the Marine Board, or otherwise instructed, should be at least 60 for each master, their stay averaging one month each. If fewer adults, the average stay to be longer, and *vice versa*. It is recommended as a measure of the success of the master in preparing adults for examination that they be supplied by the Department with printed forms in backs with counterfoils as appended. The form to be given to each adult when he proceeds to undergo his examination, to be by him given to the

Examiner ; or they might be sent independently. The Examiner at the end of the examination will enclose them to the master of the Navigation School, writing on each "passed" or "failed." These forms will then be re attached to their counterfoils, and will be an accurate record of the work done by him. CAPTAIN
DONNELLY
REPORT

4. Schools where there are adults and boys, such as Shadwell, Yarmouth, Sunderland, Newcastle, Leith, Waterford, and Liverpool, vary so considerably between the first where there have been 60 boys and 6 adults, and the last where there have been 60 adults and 6 boys, that it appears to be impossible to devise any scheme which would involve valuing the education of a boy as equivalent to the instruction of a certain number of adults, or *vice versé*. We prefer to suggest that the work done in each branch of the school be first separately estimated, and then that the Inspector, bearing in mind the minimum value already given, be desired to report on each school as to whether the results are sufficient.

We recommend that for all fresh entries of boys from this date no boy be entered until he has completed his tenth year (the fact to be verified by a copy of the baptismal certificate). Boys under that age should be at primary schools.

We recommend that in every case when a boy is entered for the first time the following form be filled up, and signed by the parent and boy :—

"I _____ in asking for the admittance of my _____ aged _____ years _____ months, to the classes of the Navigation School at _____ have been informed by Mr. _____ the Head-master, that the school has been established, and is aided by the Government, for the sole purpose of giving instruction to boys who are going to sea, and whose parents and guardians consent to and will place no obstacle in the way of their doing so."

"This provision I engage to fulfil, as any parent or guardian who sends a boy to the school or retains him there when the above statement is inapplicable, is appropriating that to which he has no right or claim, and is injuring those for whose benefit the grants are made."

We have the honour to be, &c.

(Signed) J. F. D. DONNELLY, Capt. R.E.,
Inspector for Science.

ALFRED RYDER, Capt. R.N.,
Occasional Inspector for Navigation
Schools.

This was ordered to be carried out as a means of introducing the same system into Navigation Schools. The Minutes, page 21, Appendix A., more fully carrying out the system, having been passed for all future Navigation Schools, they have been applied to two Navigation Schools in Ireland at Carrickfergus and Belfast ; but the system is so new that little has or could have been yet done under it.

There is one great difficulty in applying the system of payments to Navigation Schools, and that is, the very fluctuating character of the attendance, which necessitates the introduction of a payment on mere attendance, or of the nature of a capitation grant.

J. F. D. DONNELLY, Capt. R.E.

APPENDIX C.

Appendix C. STATEMENT of the RESULTS of the EXAMINATION of CANDIDATES for
SCIENCE TEACHERS' CERTIFICATES in SCIENCE, held in November 1860, under the
CERTIFI- Minute of the Committee of Council on Education of the 2nd June 1859.
CATES.

SUBJECT I.

PRACTICAL PLANE, and DESCRIPTIVE GEOMETRY, MECHANICAL and MACHINE
DRAWING, and BUILDING CONSTRUCTION.

SUBDIVISION I.—*Practical Plane, and Descriptive Geometry.*

Name.	Address.
1st Grade Certificate.	
Rowden, William -	Trade School, Bristol.
Hetherington, John H. -	Windsor-road, Slough.
2nd Grade Certificate.	
Dorrell, John -	Wellington-road, Slough.
Hudson, Washington -	Eagle Foundry, Manchester.
3rd Grade Certificate.	
Mellor, James -	Hollingwood, Manchester.
One failed.	

SUBDIVISION II.—*Mechanical and Machine Drawing.*

Name.	Address.
2nd Grade Certificate.	
Hudson, Washington -	Eagle Foundry, Manchester.
3rd Grade Certificate.	
Spink, John -	Cathedral School, Ripon.
Five failed.	

SUBDIVISION III.—*Building Construction.*

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Name.	Address.
3rd Grade Certificate. Hudson, Washington - Three failed.	Eagle Foundry, Manchester

SUBJECT II.

MECHANICAL PHYSICS.

SUBDIVISION I.—*Mechanics as a Science, or Theoretical Mechanics.*

Name.	Address.
1st Grade Certificate. Atkins, Edward -	Saint Martin's School, Leicester.
2nd Grade Certificate. Crawley, Samuel - Dufty, John N. - Easterby, William - Eborall, T. - Pullen, Moses - Nelson, Robert J. - Seaman, Isaac -	St. Mark's College, Chelsea. St. Mark's College, Chelsea. Trinity Schools, Ripon. St. Mark's College, Chelsea. National School, Painswick. Stroud. Navigation School, Shadwell. 18, Cumming Street, Pentonville.
3rd Grade Certificate. { Kerby, Isaac - Strachan, Richard - Causier, W., junr. - Collins, John - Spink, John - Two failed.	St. Mary's School, Putney. Trade School, Poplar. 13, Hindon-street, Pimlico. Cathedral School, Manchester. Cathedral School, Ripon.

SUBDIVISION II.—*Mechanics as an Art, or Applied Mechanics.*

Name.	Address.
3rd Grade Certificate. Collins, John - Constable, John - Spink, John - Seven failed.	Cathedral School, Manchester. Boys' School, Christleton, Chester. Cathedral School, Ripon.

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SUBJECT III.

EXPERIMENTAL PHYSICS.

SUBDIVISION I.—*Acoustics, Light, and Heat.*

Name.	Address.
1st Grade Certificate.	
Birkenhead, E. H. -	Mining School, Wigan.
Williams, W. M. -	Midland Institute, Birmingham.
2nd Grade Certificate.	
Meaden, H. P. -	East Lancashire Union of Institutions, Haslingden.
Pike, Robert W. -	Birkbeck Schools, Bethnal Green.
Pullen, Moses -	National School, Painswick, Stroud.
3rd Grade Certificate.	
Hudson, Fearnside -	68, Corporation-street, Manchester.
Briggs, A. -	Mechanics' Institution School, Chancery-lane.
Jarman, George -	Almondbury, Huddersfield.
Ford, Benjamin -	Bolckow's Iron Works, Middlesboro'.
{ Jones, Thomas -	Halon, Hastings.
{ Seaman, Isaac -	18, Cumming-street, Pentonville.
Collins, John -	Cathedral School, Manchester.
Goffin, Robert -	Exton, Oakham.
Eight failed.	

SUBDIVISION II.—*Magnetism and Electricity.*

Name.	Address.
1st Grade Certificate.	
Hargreaves, John -	National School, Goldsboro', Knaresboro'.
Nicholson, William -	Wesleyan School, Lambourne, Berks.
{ Birkenhead, E. H. -	Mining School, Wigan.
{ Pike, Robert W. -	Birkbeck Schools, Bethnal Green.
Jarman, George -	Almondbury, Huddersfield.
Williams, W. M. -	Midland Institute, Birmingham.
Noble, John -	Working Man's College, Halifax.
2nd Grade Certificate.	
Pullen, Moses -	National School, Painswick, Stroud.
Robertson, John -	Messrs. Chance's School, Oldbury.
Meaden, H. P. -	East Lancashire Union of Institutions, Haslingden.
{ Grant, William -	Wesleyan School, Clifford, Tadcaster.
{ Trower, Richard -	St. Peter's Schools, Brighton.
3rd Grade Certificate.	
Grove, John W. -	Green-coat School, Hertford.
Hudson, Fearnside -	68, Corporation-street, Manchester.
Eleven failed.	

SUBJECT IV.

Appendix C.

CHEMISTRY.

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SUBDIVISION I.—*Inorganic Chemistry.*

Name.	Address.
1st Grade Certificate.	
O'Neill, Charles -	Working Man's College, Salford.
Wood, Charles S. -	Mining School, Bristol.
2nd Grade Certificate.	
Crossley, William -	Mechanics' Institute, Middlesboro'.
Hargreaves, John -	National School, Goldsboro', Knaresboro'.
{ Dowling, John -	74, Irishtown, Clonmel.
{ Pitt, Robert -	Charterhouse Boys' School.
{ Hudson, Fearnside -	68, Corporation-street, Manchester.
{ Meaden, Henry P. -	East Lancashire Union of Institutions, Haslingden.
{ Wood, Edward -	31, Richmond-place, Brighton.
{ Merrifield, John -	St. Mary Tavy, Tavistock.
{ Spink, John -	Cathedral School, Ripon.
{ Woodcock, F. W. -	County School, Leicester.
{ Clement, Leonard -	East Lancashire Union of Institutions, Burnley.
{ Cockman, Abraham -	National School, Grantham.
{ Ives, William Field -	St. John's School, Limehouse.
{ Pearce, Richard -	Royal Institution, Truro.
{ Ricks, George -	St. John's School, Portsea.
{ Clough, James Creswell -	Grammar School, Dedham.
{ Mackrell, Isaac -	Wesleyan College, Westminster.
{ Pearsall, T. J. -	London Mechanics' Institution, Chancery-lane.
3rd Grade Certificate.	
{ Allen, William -	St. Mark's College, Chelsea.
{ Lee, Robert -	All Saints' School, Preston.
{ Gledhill, Joseph -	22, Scarborough-street, Whitechapel.
{ Cook, Charles Lukey -	National School, Beckley, Oxford.
{ Hudson, John Schofield -	St. Mark's College, Chelsea.
{ Coles, Ferdinand -	5, Montpelier-terrace, Brompton.
{ Jones, John -	Trindle-terrace, Dudley.
{ Rust, Joseph -	Maidenhead.
{ Strachan, Richard -	Trade School, Poplar.
{ Watkins, James -	Dulwich College, S.
{ Redgrave, G. R. -	18, Hyde-park-gate, South.
{ Shaw, Henry Charles -	St. Mark's College, Chelsea.
{ Conder, John -	St. Anne's School, Wandsworth.
{ Hurst, William -	Middle School, Leicester.
{ King, Thomas -	County School, Leicester.
{ Collins, John -	Cathedral School, Manchester.
{ Shinn, Thomas -	Queen's Printing Office, E.C.
{ Shawcross, William -	Northwood School, Stoke-on-Trent.
{ Atkins, George -	Knighton-street School, Leicester.
{ Grant, William -	Wesleyan School, Clifford, Tadcaster.
{ Taylor, William -	Darfield School, Barnsley.
{ Bright, William -	2, Walton Cottages, Chelsea.
Five failed.	

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SUBDIVISION II.—*Organic Chemistry.*

Name.	Address.
1st Grade Certificate.	
Noble, John -	Working Man's College, Halifax.
{ Clement, Leonard -	East Lancashire Union of Institutions, Burnley.
{ Crossley, William -	Mechanics' Institute, Middlesborough.
2nd Grade Certificate.	
{ O'Neill, Charles -	Working Man's College, Salford.
{ Wood, Charles S. -	Mining School, Bristol.
Merrifield, John -	St. Mary Tavy, Tavistock.
{ Dowling, John -	74, Irishtown, Clonmel.
{ Lee, Robert -	All Saints' School, Preston.
{ Shinn, Thomas -	Queen's Printing Office, E.C.
3rd Grade Certificate.	
Ricks, George -	St. John's School, Portsea.
Wood, Edward -	31, Richmond place, Brighton.
Woodcock, F. W. -	County School, Leicester.
{ Shawcross, William -	Northwood School, Stoke-on-Trent.
{ Spink, John -	Cathedral School, Ripon.
Hotchkin, T. E. -	9, Ashwell-street, Leicester.
Packer, M. W. -	37, Lincoln-street, Mile-end.
Rust, J. -	Maidenhead.
Three failed.	

SUBJECT V.

GEOLOGY AND MINERALOGY. ...

SUBDIVISION I.—*Geology.*

Name.	Address.
1st Grade Certificate.	
Wood, Charles S. -	Mining School, Bristol.
2nd Grade Certificate.	
Jones, John -	Trindle-terrace, Dudley.
Simpson, Bentham -	St. Matthew's School, Bethnal Green.
3rd Grade Certificate.	
Collins, John -	Cathedral School, Manchester.
Tomkins, Samuel -	Frampton Cotterill, Bristol.

SUBDIVISION II.—*Mineralogy.*

Appendix C.

Name.	Address.
1st Grade Certificate.	
Wood, Charles S. -	Mining School, Bristol.
{ Pearce, Richard -	Royal Institution, Truro.
{ Tate, Ralph -	Trade School, Bristol.
3rd Grade Certificate.	
Simpson, Bentham -	St. Matthew's School, Bethnal Green.
Two failed.	

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CATES.

SUBJECT VI.

NATURAL HISTORY.

SUBDIVISION I.—*Physiology.*

Name.	Address.
1st Grade Certificate.	
Samuelson, James -	18, Dale-street, Liverpool.
3rd Grade Certificate.	
Farncomb, Edward -	Prior-street, Greenwich.

SUBDIVISION II.—*Zoology.*

Name.	Address.
1st Grade Certificate.	
Samuelson, James -	18, Dale-street, Liverpool.
3rd Grade Certificate.	
Farncomb, Edward -	Prior-street, Liverpool.

SUBJECT VII.

BOTANY.

SUBDIVISION I.—*Vegetable Physiology and Economic Botany.*

Name.	Address.
2nd Grade Certificate.	
Wood, Edward -	31, Richmond-place, Brighton.

SUBDIVISION II.—*Systematic Botany.*

Name.	Address.
2nd Grade Certificate.	
Wood, Edward -	31, Richmond-place, Brighton.

J. F. D. DONNELLY, Capt. R.E.

APPENDIX C 1.

App. C 1.
SCIENCE
SCHOOLS
AND
CLASSES.

ABSTRACT of RETURNS from SCIENCE SCHOOLS and CLASSES
for the Year 1860.

ABERDEEN.

Science School.

The subjects taught are chemistry, theoretical mechanics, and elementary mathematics.

Chairman of the Council, The Lord Provost.

Chairman of the Committee, John Miller.

Secretary, James Sinclair.

Teachers, James S. Brazier and David Mavor.

The total number of students receiving instruction during 1860 has been 77, and the total amount of fees received has been 24*l.* 17*s.* 6*d.*

The rate of fees paid by adults and boys per week is 5*d.* for each class.

Eleven Queen's prizes of books have been taken by pupils.

The amount of aid afforded to the school by the Department during the year has been 70*l.* 18*s.*, by payments to the teachers, cost of prizes, &c.

ALMONDBURY AND HUDDERSFIELD.

Science Classes.

The subject taught is chemistry.

Secretaries, Rev. Lewis Jones and G. W. Rhodes.

Teacher, George Jarman.

The total number of students receiving instruction during 1860 has been 78.

Ten pupils have taken Queen's prizes of books.

The amount of aid afforded to the classes during the year has been 85*l.* 16*s.* 1*d.*, by payments to the teacher, cost of prizes, aid for apparatus, &c.

BIRMINGHAM.

Science Class.

The subjects taught are experimental physics and chemistry.

Chairman of the Committee, Sir Francis E. Scott, Bart.

Hon. Secretary, John Jaffray.

Teacher, W. M. Williams.

The total number of students receiving instruction during 1860 has been 110, and the total amount of fees has been 40*l.* 17*s.*

The rate of fees paid by adults and boys has been 3*d.* per week for elementary chemistry or physics, and 1*s.* 3*d.* for chemical analysis.

The amount of aid afforded to the school during the year has been 25*l.* 16*s.* 6*d.*, by payments to the teacher, aid for apparatus, &c.

BRISTOL.

Trade School.

App. C 1.

SCIENCE
SCHOOLS
AND
CLASSES.

The subjects taught are chemistry, physics, geology, natural history, and mathematics.

Chairman of the Committee, The Very Rev. the Dean of Bristol.
Secretaries, the Rev. Daniel Wright, M.A., and John Wilkson.
Teachers, Thomas Coomber, Ralph Tate, and William Rowden.

The total number of students receiving instruction during 1860 has been 94, and the total amount of fees received has been 146*l.* 10*s.* 6*d.*

The rate of fees paid by adults and boys per week is 1*s.* 3*d.*

The number of Queen's prizes taken by pupils in the school has been 21.

The amount of aid afforded to the school by the Department during the year has been 231*l.*,* by payments to teachers, cost of prizes, &c.

Mining School.

The subjects taught are chemistry, mining and geology, mineralogy, physics, drawing, mathematics.

Chairman of the Committee, H. Bennett.
Secretary, Handel Cossham.
Teacher, Chas. S. Wood.

The number of students receiving instruction during 1860 has been 16, and the total amount of fees received has been 6*l.* 19*s.* 6*d.*

The rate of fees paid by adults and boys per week is 6½*d.*

The number of Queen's prizes taken by pupils has been 5.

The amount of aid afforded to the school by the Department during the year has been 41*l.* 15*s.*, by payments to the teacher, cost of prizes, &c.

CLONMEL.

Science Class.

The subject taught is chemistry.

Teacher, John Dowling.

The number of students who came up for examination in 1860 was 36.

The number of Queen's prizes taken by pupils during the year has been 20.

The amount of aid afforded to the class by the Department during the year has been 53*l.* 5*s.*, by payments to the teacher, cost of prizes, &c.

GLASGOW.

Science Class.

The subject taught is chemistry.

Chairman of the Committee, Jas. McClelland.
Secretary, R. S. Cunliff.
Teacher, John Mayer.

The total number of students receiving instruction during 1860 has been 28.

* This includes payment to a teacher in training.

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The number of Queen's prizes taken by pupils in 1860 has been 6.

The amount of aid afforded to the school by the Department during the year has been 39*l.* 4*s.* 8*d.*, by payments to the teacher, aid for apparatus, cost of prizes, &c.

HALIFAX.

Science Class.

The subject taught is chemistry.

Secretary, James Spencer.

Teacher, John Noble.

The total number of students receiving instruction during 1860 has been 34.

The number of Queen's prizes taken by pupils during the year has been 10.

The amount of aid afforded to the school by the Department during the year has been 68*l.* 3*s.* 5*d.*, by payments to the teachers, cost of prizes, aid for apparatus, &c.

WIGAN.

Mining School.

The subjects taught are mining, geology, chemistry, and natural philosophy.

Hon. Secretary, M. W. Peace.

Master, Edward H. Birkenhead.

The total number of students receiving instruction during 1860 has been 89, and the total amount of fees has been 8*l.* 16*s.*

The National School subscribes 20*l.* a year.

The rate of fees paid by adults and boys is as follows:—Evening class, 6*d.* per week (except to members of the Mechanics' Institution and nominees of the subscribers, who pay 3*d.*)

The number of Queen's prizes taken by pupils during the year has been 12.

The amount of aid afforded to the school by the Department during the year has been 93*l.* 10*s.*, by payments to the teacher, cost of prizes, &c.

J. F. D. DONNELLY, Capt. R.E.

APPENDIX C 2.

ABSTRACT of RETURNS from NAVIGATION SCHOOLS for the
Year 1860.

App. C 2.

NAVIGATION
SCHOOLS.

ABERDEEN.—(Population in 1851—71,973.)

The School of Navigation was established in 1857. * It is held in 13, Regent Quay.

The officers of the committee of management are :—

Chairman, Alexander Anderson, Lord Provost.

Secretary, James F. Kellas.

Head-Master, Edward J. Henessey.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 195, showing a total increase of 27 since last year. The total amount of fees has been 140*l.* 11*s.*

The entire number of adults and boys who have at any time paid fees during the year are,—masters, 31; chief mates, 15; only mates, 43; second mates, 58; seamen, 33; apprentices, 10. Total number of students, 195.

The average attendance at the classes has been :—Day classes—15 adults. Evening classes—18 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week :— In the day classes, masters studying for extra certificate, 5*s.*; chief mates studying for master, 5*s.*; only mates studying for chief mates, 5*s.*; second mates studying for chief mates, 5*s.*; seamen studying for only mates, 5*s.*; for second mates, 5*s.*; apprentices studying navigation, 6*d.*; boys learning navigation, 2*s.* 6*d.*

In the evening classes, adults learning navigation, 2*s.* 6*d.*; boys learning navigation, 6*d.*

Receipts at the Navigation School at Aberdeen from the 1st of January 1860, to the 1st of January 1861, have been as follows :—The fee receipts of adults in the day classes are 133*l.* 0*s.* 6*d.*; those of adults in the evening classes, 7*l.* 10*s.* 6*d.* Grand total of fees, 140*l.* 11*s.*

The amount of aid afforded to the school by the Department has been 65*l.*, which sum includes the payments for the masters' certificates and other allowances, the payments to pupil-teachers, &c.

The school has expended 20*l.* on the local expenses for rent, cleaning, firing, lighting, printing, &c.

GLASGOW.—(Population in 1851—329,097.)

The School of Navigation was established in 1857. It is held in the Sailors' Home Building.

The officers of the committee of management are :—

Chairman, William Ewing.

Secretary, Captain Crawford.

Head-Master, Joseph Boss.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 144, showing an increase of 12 since last year. The total amount of fees has been 73*l.* 6*s.* 6*d.*

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App. C 2. The entire number of adults and boys who have at any time paid fees during the year are,—masters, 6; chief mates, 15; only mates, 10; second mates, 11; scamen, 62; sea apprentices, 10; trade apprentices, 20; boys, 10. Total number of students, 144.

The number of boys who have gone to sea during the year is 9.

The average attendance at the classes has been:—Day classes—1·15 boys; 6·12 adults. Evening classes, 10·85 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week:—In the day classes—Masters studying for extra certificate, 7s.; chief mates studying for master, 6s.; only mates studying for chief mates, 4s.; second mates studying for chief mates, 4s.; seamen studying for only mates, 3s.; for second mates, 3s.; apprentices studying navigation, 6d.; those not studying navigation, 6d.; seamen not studying navigation, 1s.; boys learning navigation, 6d.; boys not learning navigation, 6d. In the evening classes—Adults learning navigation, 1s.; not learning navigation, 6d.; boys learning navigation, 6d.; not learning navigation, 6d.

Receipts at the Navigation School at Glasgow from the 1st of January 1860, to the 1st of January 1861, have been as follows:—The fee receipts of adults in the day classes are 46l. 2s.; those of the boys in the day classes, 9l. 1s. 3d.; those of adults and boys in the evening classes, 18l. 3s. Grand total of fees, 73l. 6s. 6d.

The amount of aid afforded to the school by the Department has been 82l. 3s. 8d., which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c. The school has received as its share of the fees in aid of the local expenses,

The school has expended from its own funds, including its share of the fees, 29l. 6s. 2d. on the local expenses for rent, cleaning, firing, lighting, printing, &c.

HULL.—(Population in 1851—84,690.)

The School of Navigation was established in 1785. It is held in the Trinity House.

The officers of the committee of management are:—

Chairman, John Alder.

Secretary, E. S. Wilson.

Head-Master, Zebedee Scaping.

Assistant-Master, William R. Salmon.

Pupil-teachers, John Hodgson and Charles Kay.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 147, showing an increase of 15 since last year.

The number of boys who have gone to sea during the year is 16.

The average daily attendance at the classes has been 96·55 boys.

Note.—Some of the students attend both the day and evening classes.

The amount of aid afforded to the school by the Department has been 206l. 17s., which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c.

The school has expended from its own funds 853l. 14s. 5d. on the local expenses for rent, cleaning, firing, lighting, printing, &c.

LIVERPOOL.—(Population in 1851—375,955.)

The School of Navigation was established in 1853. It is held in the Sailors' Home.

The officers of the committee of management are :—

Chairman, John A. Tinne, Esq.

Secretary, John T. Towson, Esq.

Head-Master, Herbert J. Smart, 1st grade, 2nd assistant certificate.

First Assistant Master, James Gill, 1st grade, head-master certificate.

Second Assistant Master, George Adamson, 2nd grade, 1st assistant certificate.

App. C 2.

NAVIGATION
SCHOOLS.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 548, showing a total decrease of 116 since last year.* The total amount of fees has been 299*l.* 13*s.*

The entire number of adults and boys who have at any time paid fees during the year are,—masters, 23; chief mates, 89; only mates, 33; second mates, 88; seamen, 190; apprentices, 115; boys, 10. Total number of students, 548.

The number of boys who have gone to sea during the year is 9.

The average attendance at the classes has been :—Day classes—5 boys; 16 adults. Evening classes—15·4 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week :—In the day classes—Masters studying for extra certificate, 6*s.*; chief mates studying for master, 6*s.*; only mates studying for chief mates, 6*s.*; second mates studying for chief mates, 6*s.*; seamen studying for only mates, 6*s.*; for second mates, 6*s.*; apprentices studying navigation, 3*s.*; those not studying navigation, 3*s.*; seamen not studying navigation, 6*s.*; boys learning navigation, 2*s.* 6*d.*; boys not learning navigation, 2*s.* 6*d.* In the evening classes—Adults learning navigation, 1*s.*; not learning navigation, 6*d.*; boys learning navigation, 6*d.*; not learning navigation, 6*d.*

Receipts at the Navigation School at Liverpool from the 1st of January 1860 to the 1st of January 1861 have been as follows :—The fee receipts of adults in the day classes are 255*l.*; those of the boys in the day classes, 5*l.* 5*s.*; total, 260*l.* 5*s.*; those of adults and boys in the evening classes, 39*l.* 8*s.* Grand total of fees, 299*l.* 13*s.*

The amount of aid afforded to the school by the Department has been 224*l.* 13*s.*, which sum includes the payments for the masters' certificates and other allowances, the payments to pupil-teachers, &c. The school has received as its share of the fees in aid of the local expenses, 99*l.* 13*s.*

The school has expended from its own funds, including its share of the fees, 180*l.* 18*s.* 7*d.* on the local expenses for rent, cleaning, firing, lighting, printing, &c.

NEWCASTLE-ON-TYNE.—(Population in 1851—80,000.)

The School of Navigation was established in 1857. It is held in the Trinity House.

The officers of the committee of management are :—

Chairman, William Bell.

Secretary, William Taylor.

Head-Master, Wm. Henry Thorn.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 127, showing a decrease of 8 since last year. The total amount of fees has been 79*l.* 16*s.*

* The school for boys and the evening class for apprentices were discontinued for want of premises at the time of the burning down of the Sailors' Home in April 1860.

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The entire number of adults and boys who have at any time paid fees during the year are,—masters, 9; chief mates, 3; only mates, 12; second mates, 3; seaman, 1; apprentices, 7; boys, 92. Total number of students, 127.

The number of boys who have gone to sea during the year is 5.

The average attendance at the classes has been :—Day classes—51·38 boys; 2·5 adults.

The following is the rate of fees paid by adults and boys per week :—In the day classes—Masters studying for extra certificate, 5s.; chief mates studying for master, 5s.; only mates studying for chief mates, 5s.; second mates studying for chief mates, 5s.; seamen studying for only mates, 5s.; for second mates, 2s. 6d.; apprentices studying navigation, 6d.; those not studying navigation, 6d.; boys learning navigation, 6d.; boys not learning navigation, 6d.

Receipts at the Navigation School at Newcastle-upon-Tyne from the 1st of January 1860 to the 1st of January 1861 have been as follows :—The fee receipts of adults in the day classes are 20l. 11s.; those of the boys in the day classes, 59l. 5s. Grand total of fees, 79l. 16s.

The amount of aid afforded to the school by the Department has been 196l. 1s., which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c. The school has received as its share of the fees in aid of the local expenses, 39l. 18s.

The school has expended 94l. 3s. 3d. on the local expenses for rent, cleaning, firing, lighting, printing, &c.

POPLAR.

The School of Navigation was established in 1856. It is held in Mr. Green's Sailors' Home.

The officers of the committee of management are :—

Chairman, Richard Green.

Secretary, Captain James Furnell.

Head-Master, William Stockton.

Assistant-Masters, Richard Strachan and Charles Swinstead.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 266, showing a total increase of 113 since last year. The total amount of fees has been 202l. 2s.

The entire number of adults and boys who have at any time paid fees during the year, are chief mates, 14; second mates, 19; 3rd and 4th officers, 11; seamen, 27; midshipmen, 77; apprentices, 18; boys, 2. Evening students, boys and adults, 98; total number of students, 266.

The average attendance at the classes has been :—Day classes—9·7 adults. Evening classes—17·5 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week :—In the day classes, masters studying for extra certificate, 6s.; chief mates studying for master, 6s.; only mates studying for chief mates, 6s.; second mates studying for chief mates, 6s.; seamen studying for only mates, 6s.; for second mates, 6s.; apprentices studying navigation, 6s.; those not studying navigation, 6s.; seamen not studying navigation, 6s.; boys learning navigation, 6s.; boys not learning navigation, 6s.

In the evening classes, adults not learning navigation, 1s.; boys not learning navigation, 1s.

The school received 18 Department prizes, viz., 6 for drawing and 12 for science.

Receipts at the Navigation School at Poplar from the 1st of January 1860 to the 1st of January 1861 have been as follows :—The fee receipts

adults in the day classes are 157*l.* 15*s.*; those of adults and boys in the evening classes, 44*l.* 7*s.*; grand total of fees, 202*l.* 2*s.*

The amount of aid afforded to the school by the Department has been 140*l.* 10*s.*, which sum includes the payments for the master's certificates, and other allowances, the payments to pupil-teachers, the cost of prizes, &c. The school has received as its share of the fees in aid of the local expenses, 112*l.* 2*s.* 9*d.*

The school has expended from its own funds, including its share of the fees, 107*l.* 7*s.* 6*d.* on the local expenses for rent, cleaning, firing, lighting, printing, &c.

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SHADWELL.

The School of Navigation was established in 1857. It is held in the Lecture Hall and Class-room of the Sailors' Institute, Mercers Street.

The officers of the committee of management are:—

Secretary, Thomas A. Fieldwick.

Head-Master, Robert J. Nelson, M.A.

Assistant-Master, Joseph McCarthy.

Pupil-teachers, Robert Evans Nelson, Richard Redmond.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 227, showing a total increase of 40 since last year. The total amount of fees has been 73*l.* 8*s.* 9*d.*

The entire number of adults and boys who have at any time paid fees during the year are:—masters, 6; chief mates, 14; only mates and second mates, 48; seamen and apprentices, 81; boys, 78; total number of students, 227.

The average attendance at the classes has been:—Day and evening classes—42 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week:—In the day classes, masters studying for extra certificate, 7*s.*; chief mates studying for master, 5*s.*; only mates studying for chief mates, 5*s.*; second mates studying for chief mates, 5*s.*; seamen studying for only mates, 3*s.*; for second mates, 3*s.*; apprentices studying navigation, 1*s.*; those not studying navigation, 1*s.*; seamen not studying "to pass," 1*s.*; boys learning navigation, 6*d.*; boys not learning navigation, 6*d.*

In the evening classes, adults learning navigation, 1*s.*; not learning navigation, 1*s.*; boys learning navigation, 1*s.*; not learning navigation, 1*s.*

The school received 3 Department prizes, viz.:—

Frederick Price.

John Sandilands.

Richard Redmond.

Receipts at the Navigation School at Shadwell from the 1st of January 1860 to the 1st of January 1861 have been as follows:—The fee receipts of adults and boys in the day classes are 38*l.* 7*s.* 2*d.*; those of adults and boys in the evening classes, 35*l.* 1*s.* 7*d.*; grand total of fees, 73*l.* 8*s.* 9*d.*

The amount of aid afforded to the school by the Department has been 235*l.* 18*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c.

The school has expended 68*l.* 10*s.* 5*d.* on the local expenses for rent, cleaning, firing, lighting, printing, &c.

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SUNDERLAND.—(Population in 1851—67,394.)

The School of Navigation was established in 1855. It is held in Lodge Terrace, Hendon, near South Docks.

The officers of the committee of management are :—

Chairman, The Mayor, ex-officio.

Vice-Chairman, Rev. R. Skipsey.

Secretary, Ralph Simey.

Head-Master, James J. Stiles.

1st Assistant-Master, Henry John Saunders.

2nd Assistant-Master, Samuel H. Burchill.

Pupil-teachers, George Gibson and John Reynolds.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 372, showing a total decrease of 97 since last year. The total amount of fees has been 173*l.* 13*s.* 6*d.*

The entire number of adults and boys who have at any time paid fees during the year, are :—Extra master, 1 ; masters, 42 ; chief mates, 9 ; only mates, 74 ; second mates, 29 ; seamen, 8 ; apprentices, 21 ; others, 63 ; boys, 125 ; total number of students, 372.

The number of boys who have gone to sea during the year is 51.

The average attendance at the classes has been :—Day classes—69·02 boys, 15·17 adults. Evening classes—9·57 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week :—In the day classes, masters studying for extra certificate, 5*s.* ; chief mates studying for master, 5*s.* ; only mates studying for chief mates, 2*s.* 6*d.* ; second mates studying for chief mates, 2*s.* 6*d.* ; seamen studying for only mates, 2*s.* 6*d.* ; for second mates, 2*s.* 6*d.* ; apprentices studying navigation, 6*d.* ; those not studying navigation, 6*d.* ; seamen not studying navigation 1*s.* ; boys learning navigation, 6*d.* ; boys not learning navigation, 6*d.*

In the evening classes, adults learning navigation, 1*s.* ; not learning navigation, 1*s.* ; boys learning navigation, 6*d.* ; not learning navigation, 6*d.*

Receipts at the Navigation School at Sunderland, from the 1st of January 1860, to the 1st of January 1861, have been as follows :—The fee receipts of adults in the day classes are 97*l.* 8*s.* ; those of the boys in the day classes 59*l.* 5*s.* 6*d.* ; those of adults and boys in the evening classes, 17*l.* ; grand total of fees, 173*l.* 13*s.* 6*d.*

The amount of aid afforded to the school by the Department has been 284*l.* 9*s.* 8*d.*, which sum includes the payments for the master's certificate and other allowances, the payments to pupil-teachers, &c. The school has received as its share of the fees in aid of the local expenses 73*l.* 5*s.* 1*d.*

The school has expended from its own funds, including its share of the fees, 170*l.* 4*s.* 8*d.* on the local expenses for rent, cleaning, firing, lighting, printing, &c.

WATERFORD.—(Population in 1851—29,288.)

The School of Navigation was established in 1857. It is held in the District Model School.

The officers of the committee of management are :—

Chairman, John G. Fleming, Esq., Head Inspector of National Schools.

Secretary, James M'Lachlin, District Inspector of National Schools.

Head-Master, Michael Sullivan, 2nd grade, 2nd assistant certificate.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 49, showing a decrease of 8 since last year. The total amount of fees has been 22*l.* 6*s.*

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The entire number of adults and boys who have at any time paid fees during the year are:—Masters, 7; chief mate, 1; only mate, 1; second mates, 3; seamen, 14; apprentices, 2; boys, 21; total number of students, 49.

The number of boys who have gone to sea during the year is 5.

The average attendance at the classes has been:—Day class—61 boys, 17 adults. Evening classes—2 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week:—In the day classes, masters studying for extra certificate 1*s.* 3*d.*; chief mates studying for master, 1*s.* 3*d.*; only mates studying for chief mates, 1*s.* 3*d.*; second mates studying for chief mates, 1*s.* 3*d.*; seamen studying for only mates, 1*s.* 3*d.*; for second mates, 1*s.* 3*d.*; apprentices studying navigation, 1*s.* 3*d.*; those not studying navigation, 1*s.* 3*d.*; seamen not studying navigation, 1*s.* 3*d.*; boys learning navigation, 1*s.* 3*d.*; boys not learning navigation, 1*s.* 3*d.*

In the evening classes, adults learning navigation, 1*s.* 3*d.*; not learning navigation, 1*s.* 3*d.*; boys learning navigation, 1*s.* 3*d.*; not learning navigation, 1*s.* 3*d.*

Receipts at the Navigation School at Waterford from the 1st of January 1860 to the 1st of January 1861 have been as follows:—The fee receipts of adults in the day classes are 4*l.* 12*s.* 6*d.*; those of the boys in the day classes, 12*l.* 16*s.*; those of adults and boys in the evening classes, 4*l.* 17*s.* 6*d.*; grand total of fees, 22*l.* 6*s.*

The amount of aid afforded to the school by the Department has been 83*l.* 1*s.* 4*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c.

WELLS STREET, LONDON DOCKS.

The School of Navigation was established in 1854. It is held in the Sailors' Home.

The officers of the committee of management are:—

Chairman, Admiral Sir Henry Hope.

Secretary, Captain G. Pierce.

Head-Master, John Newton.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 201, showing an increase of 13 since last year. The total amount of fees has been 45*l.* 4*s.* 6*d.*

The entire number of adults and boys who have at any time paid fees during the year are,—masters, 1; chief mates, 12; only mates, 2; second mates, 19; seamen, 108; apprentices, 59. Total number of students, 201.

The following is the rate of fees paid by adults and boys per week:—In the day classes—Masters studying for extra certificate, 6*s.*; chief mates studying for master, 6*s.*; only mates studying for chief mates, 6*s.*; second mates studying for chief mates, 6*s.*; seamen studying for only mates, 6*s.*; for second mates, 6*s.*; apprentices studying navigation, 6*d.*; those not studying navigation, 6*d.*; seamen not studying navigation, 1*s.*

In the evening classes—Adults learning navigation, 1*s.*; not learning navigation, 1*s.*

Receipts at the Navigation School at Wells Street, from the 1st of January 1860 to the 1st of January 1861, have been as follows:—The fee receipts of adults in the day classes are 44*l.* 5*s.* 6*d.*; those of adults and boys in the evening classes, 19*s.*; grand total of fees, 45*l.* 4*s.* 6*d.*

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The amount of aid afforded to the school by the Department has been 74*l.* 5*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c. The school has received as its share of the fees in aid of the local expenses, 15*l.* 1*s.* 6*d.*

The school has expended from its own funds, including its share of the fees, 28*l.*, on the local expenses for rent, cleaning, firing, lighting, printing, &c.

Note.—The school was closed from 8th February to 14th May 1860.

GREAT YARMOUTH.—(Population in 1851—30,879.)

The School of Navigation was established in 1857. It is held in a house on the South Quay.

The officers of the committee of management are :—

Chairman, The Mayor (S. Nightingale, Esq.).

Secretaries, Matthew Butcher.

Head-Master, J. R. Jones.

1st Assistant-Master, Leonard Allen.

Pupil-Teacher, Robins Purdy.

The total number of students receiving instruction in or through the agency of the school during 1860 has been 120, showing a total decrease of 22 since last year. The total amount of fees has been 42*l.* 0*s.* 6*d.*

The entire number of adults and boys who have at any time paid fees during the year are,—chief mates, 1; only mates, 1; second mates, 6; seamen, 31; apprentices, 11; boys, 70. Total number of students, 120.

The number of boys who have gone to sea during the year is 20.

The average attendance at the classes has been :—Day classes—15 boys, 3 adults. Evening classes—31 boys and adults.

Note.—Some of the students attend both the day and evening classes.

The following is the rate of fees paid by adults and boys per week :—In the day classes,—masters studying for extra certificate, 6*s.*; chief mates, studying for master, 5*s.*; only mates studying for chief mates, 4*s.*; second mates studying for chief mates, 4*s.*; seamen studying for only mates, 3*s.*; for second mates, 3*s.*; apprentices studying navigation, 3*s.*; those not studying navigation, 3*s.*; seamen not studying navigation, 3*s.*; boys learning navigation, 6*d.*; boys not learning navigation, 3*d.* In the evening classes—Adults learning navigation, 1*s.*; not learning navigation, 1*s.*; boys learning navigation, 6*d.*; not learning navigation, 6*d.*

Receipts at the Navigation School at Great Yarmouth, from the 1st of January 1860 to the 1st of January 1861 have been as follows :—The fee receipts of adults in the day classes are 21*l.* 19*s.* 6*d.*; those of the boys in the day classes, 17*l.* 8*s.*; those of adults and boys in the evening classes, 2*l.* 13*s.* Grand total of fees, 42*l.* 0*s.* 6*d.*

The amount of aid afforded to the school by the Department has been 265*l.* 19*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to pupil-teachers, &c. The school has received as its share of the fees in aid of the local expenses 31*l.* 11*s.* 6*d.*

The school has expended from its own funds, including its share of the fees, 60*l.* 11*s.* 6*d.* on the local expenses for rent, cleaning, firing, lighting, printing, &c.

The LEITH SCHOOL having lost its Navigation master was closed during nearly the whole of the year 1860. It is now re-opened.

J. F. D. DONNELLY, Capt. R.E.

DOCUMENTS RELATING TO ART ADMINISTRATION.

APPENDIX D.

ANNUAL REPORT of the HEAD MASTER on the TRAINING SCHOOL, Appendix D. SOUTH KENSINGTON.

TRAINING
SCHOOL,
SOUTH KEN-
SINGTON.

SIR,

As I had the honour of submitting last year a full report on the training school, showing in detail its character and its relation to the art education of the country generally, I propose to furnish in this report only a continuation of the results for the present year, similar to those contained in my last report.

During the year ending 28th February 1861, over which this report extends, the greatest number of students in training at one time was 61. Thirteen students have been admitted as students in training during the year; of these, eight were from provincial, one from the metropolitan school; one was previously unconnected, and three were masters in provincial schools, who returned for further study. Twelve students from the training school have been appointed to masterships, and four mistresses have been appointed during the year to teaching which entitles them to payment on their certificates. Six students (five of them females) have retired from the training school, and three have been dismissed during the same period.

The number of individual students to whom allowances were paid during the year was 68.

The average period during which the present students have been in the training school is two years and four months.

The number of certificates taken during the year has been divided as follows :—

1st, or Elementary	-	-	-	-	13
2nd, Painting	-	-	-	-	4
3rd, Figure	-	-	-	-	1
4th, Modelling Ornament	-	-	-	-	3
5th, Modelling Figure	-	-	-	-	1
6th <i>a</i> , Mechanical Drawing	-	-	-	-	11
6th <i>b</i> , Architectural do.	-	-	-	-	7

The number of students receiving allowances at the close of the scholastic year was 50.

Besides the students in training who receive allowances, 40 have been permitted to attend the school without payment of fees.

The numbers of the students of all classes who have paid fees were, in the half year ending 31st July 1860, 389; in the half year ending 28th February 1861, 358. The total amount of fees paid for instruction during the year was 1,457*l.* 16*s.*

The children of a parochial school continue to be taught in the training school as practice for the students in training. The men of the Royal

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Appendix D. Engineers stationed at South Kensington also receive instruction. The total number of students taught in the schools during the session ending 31st July 1860 was 541; in the session ending 28th February 1861 it was 509.

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TRAINING
SCHOOL,
SOUTH KEN-
SINGTON.

In the medal competitions in 1860, 43 bronze and eight national medallions were awarded to the male and female training schools. Charterhouse district school obtained 6 bronze and one national; Rotherhithe, 3 bronze and one national; Finsbury, 16 bronze and 2 national; Spitalfields, 8 bronze and 2 national; making a total of 76 bronze medals and 12 national medallions, exclusive of the female school in Queen Square, Bloomsbury, held till June at 37, Gower Street, and the St. Martin's School of Art.

In the second grade examination, 366 rewards and four prize student-ships were awarded to students of the London schools, and in the first or lowest grade 280 rewards and 301 elementary prizes were awarded.

The average attendance during the year at the district school at Spitalfields has been 99; at Finsbury, 142; at Charterhouse, 70; Lambeth, 113; Rotherhithe, 20; Hampstead, 28; and at St. George's-in-the-East, 26.

In parochial and other similar schools the average number of children under instruction during the year has been 9,801, showing an increase of 390 on the numbers of the previous year. It is satisfactory to know, in consequence of the increased assistance given by the masters and pupil-teachers in parochial schools, that the teachers sent from the training school are enabled to give more advanced instruction than formerly, that the students drawing from models have increased by 384 over the number so engaged last year, and that students from time to time find employment direct from the schools in consequence of the drawing power they have obtained in them.

I am, &c.

The Secretary,
Science and Art Department.

R. BURCHETT.

APPENDIX E.

ABSTRACT OF RETURNS FROM SCHOOLS OF ART for the Year 1860.

Appendix E.
SCHOOLS OF
ART.

ABERDEEN.—(Population in 1851—71,973.)

Established in 1853. It is held in the Mechanics' Institution.

The officers of the committee of management are:—

The Lord Provost, Chairman.

James Sinclair, Secretary.

Peter Cleland, Head-Master; 1 certificate.

John P. Fraser, James Strachan, James Gifford, and David Dunn are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,504, showing a total increase of 142 since last year. This number includes 1,100 children of public schools, paying 65*l.*; 130 students taught in private schools, paying 120*l.*; 28 school-teachers and pupil-teachers, paying 6*l.* 9*s.* 1½*d.*; and 246 students who have attended the Central School, from whom 87*l.* 7*s.* 5*d.* has been received. The total amount of fees has been 278*l.* 16*s.* 6½*d.*, showing an increase of 4*l.* 3*s.* 9½*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—17 students, who have paid 5*s.* a month; total, 10*l.* 15*s.* Evening classes—229 students, who have paid 2*s.* and 2*s.* 6*d.* a month. The amount of these fees has been 76*l.* 12*s.* 5*d.*

The school received two Department prizes (10*l.*), with two national medallions; in addition to which 12 local medals; 12 second grade rewards, and 14 first grade rewards have been obtained. The school has expended from its own funds 10*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in July.

An exhibition of the students' works was held, and was attended by 150 visitors.

The amount of aid afforded to the school by the Department has been 166*l.* 12*s.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

ANDOVER and BASINGSTOKE.—(Population in 1851—17,266.)

Established in 1854. It is held in Bridge Street.

The officers of the committee of management are:—

The Mayor, Chairman.

John R. Fox, Secretary.

George Ryles, Head-Master; 2 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 275, showing a total decrease of 265 since last year. This number includes 203 children of public

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Appendix E. schools, paying 10*l.*; 12 students of private schools, paying 20*l.*; 8 school-teachers and pupil-teachers, paying 5*l.*; and 52 students who have attended the Central School, from whom 67*l.* 14*s.* 6*d.* has been received. The total amount of fees has been 102*l.* 14*s.* 6*d.*, showing a decrease of 20*l.* 6*s.* 6*d.* from the sum received last year.

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The attendance at the classes has been :—Day classes—16 students, who have paid 1*l.* 5*s.* and 2*l.* 10*s.* per annum, and an entrance fee of 3*s.*; total, 42*l.* 10*s.* Evening classes—36 students, who have paid 1*s.* to 2*s.* per month, and 2*s.* entrance fee. The amount of these fees has been 25*l.* 4*s.* 6*d.*

Fourteen local medals, 5 second grade rewards, and 16 first grade rewards have been obtained.

The annual inspection and public examination took place in December.

An exhibition of the students' work took place, and was attended by about 300 visitors.

The amount of aid afforded to the school by the Department has been 38*l.* 19*s.* 10*d.*, which sum includes the payments for the master's certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

ARBROATH.—(Population in 1851—17,008.)

Established in 1860. It is held in Exchange Hall, Market Place.

The officers of the committee of management are :—

James Anderson Dickson, The Provost, Chairman.

John Wilson Legge, Secretary and Head-Master.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 497. This number includes 370 children of public schools; 24 students of private schools, paying 20*l.*; 24 school-teachers and pupil-teachers, paying 5*l.* 10*s.*; and 79 students who have attended the Central School, from whom 41*l.* has been received. The total amount of fees has been 66*l.* 10*s.*

The attendance at the classes has been :—Day classes—46 students, who have paid 10*d.* to 1*s.* 8*d.* per month; total, 22*l.* Evening classes—33 students, who have paid 2*s.* to 2*s.* 6*d.* per month. The amount of these fees has been 19*l.*

Two exhibitions of the students' works took place, and was attended by about 800 visitors.

The amount of aid afforded to the school by the Department has been 9*l.* 3*s.* 4*d.* in the purchase of examples.

BASINGSTOKE. See **ANDOVER.**

BATH.—(Population in 1851—54,240.)

Established in 1854. It is held in St. James' Street.

The officers of the committee of management are :—

Rev. E. Douglas Tinling, Chairman.

C. E. Davis, F.S.A., Secretary.

J. Hill, Head-Master; 3 certificates.

Arthur Francis and Edward Mercer are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,282, showing a total increase of 510 since last year. This number includes 1,130 children of public schools, paying 25*l.*; 52 students of private schools, paying 34*l.*; 24 school-teachers and pupil-teachers, paying 1*l.* 15*s.*; and 76 students who have attended the Central School, from whom 107*l.* 1*s.* 6*d.* has been

received. The total amount of fees has been 167*l.* 16*s.* 6*d.*, showing an increase of 88*l.* 1*s.* 9*d.* over the sum received last year. Appendix E.

The attendance at the classes has been :—Day classes—16 students, who have paid 3*s.* 6*d.* to 7*s.* a month; total, 58*l.* 10*s.* 3*d.* Evening classes—60 students, who have paid 2*s.* a month, and 2*s.* entrance fee. The amount of these fees has been 48*l.* 11*s.* 3*d.* SCHOOLS OF ART.

The school received one Department prize (10*l.*), with one national medallion; in addition to which 14 local medals, 8 second grade rewards, and 29 first grade rewards have been obtained.

The annual inspection and public examination took place in April.

The amount of aid afforded to the school by the Department has been 110*l.* 2*s.* which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

BELFAST.—(Population in 1851—99,660.)

Established in 1850. It is held in the Philosophical Institution.

Robert Hale, Head-Master; 2 certificates.

One second grade reward, and 35 first grade rewards have been obtained.

The public examination took place in December.

The amount of aid afforded to the school by the Department has been 32*l.* 11*s.* 6*d.*, which sum includes the payments for the master's certificate and other allowances, also the grants on account of the children who obtained rewards, &c.

BIRKENHEAD.—(Population in 1851—24,285.)

Established in 1855. It is held in Brook Street.

The officers of the committee of management are :—

W. Balleny, Chairman.

William H. Sloman, Secretary.

J. Bentley, Head-Master; 4 certificates.

Nine local medals, 2 second grade rewards, and 3 first grade rewards have been obtained.

The annual inspection and public examination took place in December, after which the school closed, and a new committee of management undertook to re-open one in other and better premises.

The amount of aid afforded to the school by the Department has been 31*l.* 12*s.* 3*d.*, which sum includes the payments for the master's certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

BIRMINGHAM.—(Population in 1851—234,841.)

Established in 1842. It is held in New Street.

The officers of the committee of management are :—

Sir Francis E. Scott, Bart., Chairman.

Edwin Laundry, Secretary.

David W. Raimbach, Head-Master; 1 certificate.

William Wallis, William H. Sounes (4 certificates), and

Edward Blizard (3 certificates), Assistant-Masters.

Thomas Bingley, Mary A. Preston, and Alfred Brown are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 2,030, showing a total decrease

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Appendix E. of 131 since last year. This number includes 1,156 children of public schools, paying 120*l.*; 48 school-teachers and pupil-teachers, paying 14*l.* 17*s.*; and 826 students who have attended the Central School, from whom 596*l.* 13*s.* 6*d.* has been received. The total amount of fees has been 731*l.* 10*s.* 6*d.*, showing an increase of 19*l.* 4*s.* 6*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—208 students, who have paid 1*s.* to 6*s.* per month; total, 290*l.* 4*s.* 6*d.* Evening classes—618 students, who have paid 1*s.* to 3*s.* per month. The amount of these fees has been 306*l.* 9*s.*

Eight students have qualified themselves for prize-studentships, and have received certificates.

The school received one Department prize (10*l.*), with one national medallion, in addition to which 24 local medals, 131 second grade rewards, and 55 first grade rewards have been obtained. The school has expended from its own funds 4*l.* 3*s.* 3*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in February.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 490*l.* 0*s.* 5*d.*; which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

BOLTON.—(Population in 1851—61,171.)

Established in 1857. It is held in the Church Institution.

The officers of the committee of management are:—

Rev. H. Powell, Chairman.

Rev. C. E. Turner, Secretary.

J. W. Walker, Head-Master; 3 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,170, showing a total decrease of 23 since last year. This number includes 1,030 children of public schools, paying 15*l.*; 64 school-teachers and pupil-teachers, paying 19*l.* 1*s.*; and 76 students who have attended the Central School, from whom 101*l.* 0*s.* 6*d.* has been received. The total amount of fees has been 135*l.* 1*s.* 6*d.*, showing a decrease of 24*l.* 6*s.* from the sum received last year.

The attendance at the classes has been:—Day classes—19 students, who have paid 3*s.* 6*d.* to 7*s.* per month; total, 44*l.* 12*s.* 6*d.* Evening classes—57 students, who have paid 10*d.* to 1*l.* 10*s.* per month. The amount of these fees has been 56*l.* 8*s.*

Five students have qualified themselves for prize-studentships, and have received certificates.

The school received one Department prize (10*l.*), with one national medallion; in addition to which 15 local medals, 20 second grade rewards, and 21 first grade rewards have been obtained.

The annual inspection and public examination took place in December.

An exhibition of the students' works was held in December, and was attended by 1,137 persons.

The amount of aid afforded to the school by the Department has been 106*l.* 6*s.* 4*d.*, which sum includes the payments for the master's certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

BOSTON.—(Population in 1851—15,132.)

Established in 1860. It is held in the Market Place.

The officers of the committee of management are:—

Rev. G. B. Blenkin, Chairman.

W. Gane, W. H. Wheeler, Secretaries.

Vernon Howard, Head-Master; 3 certificates.

The school has not yet been examined.

BRIDGNORTH.—(Population in 1851—6,171.)

Established in 1858. It is held in the New Market Buildings, Listley Street.

The officers of the committee of management are:—

Rev. Horatio J. Ward, M.A., Chairman.

Rev. D. D. Evans, Secretary.

James A. Mulligan, Head-Master; 2 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 69. This number includes 5 school-teachers and pupil-teachers, paying 1*l.*; and 64 students who have attended the Central School, from whom 92*l.* 15*s.* 3*d.* has been received. The total amount of fees has been 93*l.* 15*s.* 3*d.*

The attendance at the classes has been:—Day classes—45 students, who have paid 12*s.* 6*d.* per quarter, and an entrance fee of 5*s.*; total, 85*l.* 1*s.* 9*d.* Evening classes—19 students who have paid 3*s.* per quarter, and 2*s.* 6*d.* entrance fee. The amount of these fees has been 7*l.* 13*s.* 6*d.*

The number of successful candidates at the examination is included with the School of Art, Coalbrookdale.

The school has expended from its own funds 7*l.* 2*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The amount of aid afforded to the school by the Department has been 9*l.* 12*s.* 3*d.*, which sums includes the payments for the master's certificates and other allowances, aid in the purchase of examples, &c.

BRIDGWATER.—(Population in 1851—10,960.)

Established in 1860. It is held in George Street.

The officers of the committee of management are:—

John Brown, Chairman.

S. A. Bailey, Secretary.

James A. Davis, Head-Master; 2 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 344. This number includes 220 children of public schools, paying 25*l.*; 20 students of private schools, paying 15*l.*; 15 school-teachers and pupil-teachers, paying 4*l.* 7*s.*; and 89 students who have attended the Central School, from whom 121*l.* 7*s.* 5*d.* has been received. The total amount of fees has been 165*l.* 14*s.* 5*d.*

The attendance at the classes has been:—Day classes—28 students, who have paid 8*s.* per month, and an entrance fee of 5*s.*; total, 52*l.* 4*s.* 3*d.* Evening classes—61 students, who have paid 1*s.* to 4*s.* per month; and 1*s.* to 5*s.* entrance fee. The amount of these fees has been 69*l.* 3*s.* 2*d.*

The school has not yet been examined.

The amount of aid afforded to the school by the Department has been 22*l.* 15*s.* 3*d.*, which sum includes the payments for the master's certificates, &c.

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SCHOOLS OF
ART.

BRIGHTON.—(Population in 1851—65,569.)

Established in 1859. It is held in Palace Place.

The officers of the committee of management are :—

Rev. John Griffith, M.A., Chairman.

Frederic Merrifield and Samuel Evershed, Secretaries.

John White, Head-Master; 2 certificates.

Henry S. Farncombe is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,459, showing a total increase of 602 since last year. This number includes 816 children of public schools, paying 30*l.*; 418 students of private schools, paying 79*l.*; 28 school-teachers and pupil-teachers, paying 6*l.* 17*s.* 6*d.*; and 197 students who have attended the Central School, from whom 193*l.* 15*s.* 6*d.* has been received. The total amount of fees has been 309*l.* 13*s.*, showing an increase of 10*l.* 15*s.* 9*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—61 students, who have paid 10*s.* per month, and an entrance fee of 6*s.*; total, 123*l.* 11*s.* Evening classes—136 students, who have paid from 6*d.* to 7*s.* a month, and 1*s.* to 4*s.* entrance fee. The amount of these fees has been 70*l.* 4*s.* 6*d.*

One student has qualified himself for a prize-studentship, and has received a certificate.

Thirteen local medals, 20 second grade rewards, and 43 first grade rewards have been obtained. The school has expended from its own funds 14*l.* 5*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in December.

An exhibition of the students' works took place, and was attended by about 1,000 persons.

The amount of aid afforded to the school by the Department has been 72*l.* 10*s.* 7*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

BRISTOL.—(Population in 1851—173,328.)

Established in 1853. It is held in the Academy of Arts.

The officers of the committee of management are :—

P. W. S. Miles, Chairman.

Rev. J. Heyworth and J. B. Harford, Secretaries.

R. E. Ferrier, Head-Master; 1 certificate.

W. S. Cosbie, Assistant Master; 4 certificates.

William Harford and Alice Pery are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 2,693, showing a total decrease of 841 since last year. This number includes 2,068 children of public schools, paying 40*l.*; 275 students of private schools, paying 81*l.*; 37 school-teachers and pupil-teachers, paying 5*l.* 10*s.* 6*d.*; and 313 students who have attended the Central School, from whom 260*l.* 3*s.* 6*d.* has been received. The total amount of fees has been 386*l.* 14*s.*, showing an increase of 40*l.* 2*s.* over the sum received last year.

The attendance at the classes has been :—Day classes—211 students, who have paid from 5*s.* to 20*s.* per month, and an entrance fee of 5*s.*; total, 209*l.* 14*s.* Evening classes—102 students, who have paid 2*s.* to 4*s.* per month, and 2*s.* entrance fee. The amount of these fees has been 50*l.* 9*s.* 6*d.*

One student has qualified herself for a prize-studentship, and has Appendix B. received a certificate.

Fourteen local medals, 17 second grade rewards, and 84 first grade SCHOOLS OF ART. rewards have been obtained.

An exhibition of the students' works took place, and was attended by 1,581 visitors.

The amount of aid afforded to the school by the Department has been 107*l.* 7*s.* 3*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

BROMSGROVE (*see* WORCESTER).—(Population in 1851—24,822.)

Established in 1859. It is held in High Street.

The amount of aid afforded to the school by the Department has been 4*l.* 18*s.* 5*d.*, towards the purchase of examples.

BURNLEY.—(Population in 1851—33,000.)

Established in 1853. It is held in Market Street, Manchester Road.

The officers of the committee of management are :—

Sir James K. Shuttleworth, Bart., Chairman.

John Sutherland, Secretary.

James Carter, Head-Master; 3 certificates.

James Pickhöver is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 898, showing a total decrease of 101 since last year. This number includes 719 children of public schools, paying 19*l.* 19*s.* 6*d.*; 65 school-teachers and pupil-teachers, paying 14*l.* 2*s.* 6*d.*; and 114 students who have attended the Central School, from whom 70*l.* 11*s.* 6*d.* has been received. The total amount of fees has been 104*l.* 13*s.* 6*d.*, showing an increase of 29*l.* 11*s.* 6*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—50 students, who have paid 2*s.* to 10*s.* per quarter; total, 49*l.* 8*s.* 6*d.* Evening classes—64 students, who have paid 1*s.* 6*d.* to 2*s.* 6*d.* per quarter. The amount of these fees has been 21*l.* 3*s.*

Six local medals, 6 second grade rewards, and 29 first grade rewards have been obtained.

The annual inspection and public examination took place in December.

An exhibition of the students' works took place, and was attended by 250 visitors.

The amount of aid afforded to the school by the Department has been 67*l.* 1*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

BURSLEM.—(Population in 1851—19,725.)

Established in 1853. It is held in the Mechanics' Institution.

The officers of the committee of management are :—

Thomas Pinder, Chairman.

Joseph Mayer, Secretary.

Head-Master (in abeyance).

This school was not examined during the year 1860.

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CAMBRIDGE.—(Population in 1851—27,000.)

SCHOOLS OF
ART.

Established in 1858. It is held in Sidney Street.

The officers of the committee of management are:—

Rev. W. Emery, Chairman.

Rev. W. J. Beamont, Secretary.

R. Harley, Head-Master; 3 certificates.

H. Wiles is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 920, showing a total increase of 125 since last year. This number includes 729 children of public schools, paying 32*l.* 10*s.*; 32 students of private schools, paying 18*l.* 15*s.*; 37 school-teachers and pupil-teachers, paying 4*l.* 12*s.*; and 122 students who have attended the Central School, from whom 161*l.* 13*s.* has been received. The total amount of fees has been 217*l.* 10*s.*, showing a decrease of 3*l.* 2*s.* 6*d.* from the sum received last year.

The attendance at the classes has been:—Day classes—70 students, who have paid 4*s.* and 7*s.* per month, and an entrance fee of 2*s.* 6*d.* and 5*s.*; total, 128*l.* 8*s.* 6*d.* Evening classes—52 students, who have paid 2*s.* to 7*s.* per month, and 2*s.* to 5*s.* entrance fee. The amount of these fees has been 33*l.* 4*s.* 6*d.*

One student has qualified himself for a prize-studentship and has received a certificate.

The school received one Department prize (10*l.*), with one national medallion; in addition to which 5 local medals, 20 second grade rewards, and 13 first grade rewards have been obtained. The school has expended from its own funds 6*l.* 2*s.* 11*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in February.

An exhibition of the students' works took place, and was attended by about 800 visitors.

The amount of aid afforded to the school by the Department has been 93*l.* 16*s.* 11*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

CARLISLE.—(Population in 1851—30,000.)

Established in 1854. It is held in Finkle Street.

The officers of the committee of management are:—

The Mayor, Chairman.

D. M'Alpin, Secretary.

H. Lees, Head-Master; 3 certificates.

Joseph Pickering is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 627, showing a total decrease of 82 since last year. This number includes 420 children of public schools, paying 10*l.*; 90 students of private schools, paying 40*l.*; 24 school-teachers and pupil-teachers, paying 5*l.* 19*s.*; and 93 students who have attended the Central School, from whom 45*l.* 18*s.* has been received. The total amount of fees has been 101*l.* 17*s.*, showing a decrease of 12*l.* 15*s.* from the sum received last year.

The attendance at the classes has been:—Day classes—14 students, who have paid 4*s.* per month; total, 9*l.* Evening classes—79 students, who have paid 1*s.* and 2*s.* per quarter. The amount of these fees has been 36*l.* 18*s.*

Two students have qualified themselves for prize-studentships and have received certificates. Appendix E
SCHOOLS OF ART.

The school received one Department prize (10*l.*), with one national medallion; in addition to which 14 local medals, 8 second grade rewards, and 11 first grade rewards have been obtained. The school has expended from its own funds 11*l.* 4*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

Two exhibitions of the students' works took place, and were attended by 2,987 visitors.

The amount of aid afforded to the school by the Department has been 97*l.* 6*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

CARMARTHEN (with Branch at SWANSEA).—(Population in 1851—10,524.)

Established in 1854. It is held in the Parade.

The officers of the committee of management are :—

W. Morris, Chairman.

John Thomas, Secretary.

F. F. Hosford, Head-Master ; 2 certificates.

David Jones and William Jones are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,158, showing a total increase of 63 since last year. This number includes 990 children of public schools, paying 20*l.* ; 109 students of private schools, paying 96*l.* 5*s.* : 23 school-teachers and pupil-teachers, paying 1*l.* 9*s.* 2*d.* ; and 36 students who have attended the Central School, from whom 24*l.* 16*s.* 10½*d.* has been received. The total amount of fees has been 142*l.* 11*s.* 0½*d.*, showing an increase of 51*l.* 0*s.* 0½*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—26 students, who have paid 2*s.* to 5*s.* per month; total, 15*l.* 7*s.* Evening classes—10 students, who have paid 2*s.* and 3*s.* per month. The amount of these fees has been 9*l.* 9*s.* 10½*d.*

Two local medals, 9 second grade rewards, and 17 first grade rewards have been obtained.

The annual inspection and public examination took place in November.

The amount of aid afforded to the school by the Department has been 82*l.* 19*s.* 6*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

CARNARVON.—(Population in 1851—8,674.)

Established in 1853. It is held in Llanberis Road.

The officers of the committee of management are :—

Rev. J. C. Vincent, Chairman.

H. P. Manley, Secretary.

J. C. Rowland, Head-Master ; 1 certificate.

Richard D. Thomas and Owen M. Roberts are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,325, showing a total

Appendix E. increase of 429 since last year. This number includes 1,199 children of public schools, paying 75*l.*; 33 students in private schools, paying 19*l.* 5*s.*; 26 school-teachers and pupil-teachers, paying 1*l.* 15*s.*; and 67 students who have attended the Central School, from whom 62*l.* 4*s.* has been received. The total amount of fees has been 158*l.* 4*s.*, showing an increase of 7*l.* 17*s.* over the sum received last year.

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The attendance at the classes has been:—Day classes—7 students, who have paid 20*s.* and 21*s.* per month; total, 25*l.* 5*s.* Evening classes—60 students, who have paid 2*s.* to 10*s.* per month. The amount of these fees has been 36*l.* 19*s.*

Six local medals, 10 second grade rewards, and 16 first grade rewards have been obtained. The school has expended from its own funds 9*l.* 5*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

The amount of aid afforded to the school by the Department has been 71*l.* 18*s.* 6*d.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

CHELTENHAM.—(Population in 1851—35,000.)

Established in 1853. It is held at 45, Winchcomb Street.

The officers of the committee of management are:—

Rev. H. W. Bellairs, Chairman.

R. Beamish, F.R.S., Secretary.

James P. Knight, Head-Master; 1 certificate.

Edwin S. Winters is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,529, showing a total increase of 239 since last year. This number includes 1,304 children of public schools; 20 students of private schools, paying 18*l.*; 41 school-teachers and pupil-teachers, paying 3*l.*; and 164 students who have attended the Central School, from whom 100*l.* 6*s.* has been received. The total amount of fees has been 121*l.* 6*s.*, showing an increase of 15*l.* 1*s.* 6*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—62 students, who have paid 15*s.* per quarter; total, 60*l.* 6*s.* Evening classes—102 students, who have paid 5*s.* per quarter. The amount of these fees has been 40*l.*

Four students have qualified themselves for prize-studentships, and have received certificates.

Nineteen local medals, 23 second grade rewards, and 48 first grade rewards have been obtained. The school has expended from its own funds 4*l.* 14*s.* 5*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in May.

An exhibition of the students' works was held in May, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 125*l.* 12*s.* 1*d.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teacher, also the money awards on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

CHESTER.—(Population in 1851—27,766.)

Appendix E.

SCHOOLS OF
ART.

Established in 1853. It is held in the Lecture Hall, Lower Bridge Street, and has branches at Wrexham and Crewe.

The officers of the committee of management are :—

W. Wardell, Chairman.

Rev. Arthur Rigg, Secretary.

Ellis A. Davidson, Head-Master ; 1 certificate.

Thomas Griffith and Samuel Fildes are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 2,680, showing a total increase of 686 since last year. This number includes 2,471 children of public schools, paying 10*l.* 10*s.* ; 33 students of private schools, paying 32*l.* 10*s.* ; 44 school-teachers and pupil teachers ; and 132 students who have attended the Central School, from whom 68*l.* 19*s.* 6*d.* has been received. The total amount of fees has been 208*l.* 19*s.* 6*d.*, showing a decrease of 14*l.* 2*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—50 students, who have paid 5*s.* to 10*s.* per month ; total, 28*l.* 15*s.* Evening classes—82 students, who have paid 1*s.* to 3*s.* per month, and 1*s.* entrance fee. The amount of these fees has been 40*l.* 4*s.* 6*d.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Nine local medals, 33 second grade rewards, and 158 first grade rewards have been obtained. The school has expended from its own funds 1*l.* 6*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in November.

The amount of aid afforded to the school by the Department has been 166*l.* 9*s.* 6*d.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

... CIRENCESTER.—(Population in 1851—6,096.)

Established in 1860. It is held in Dyer Street.

The officers of the committee of management are :—

T. C. Masters, Chairman.

H. Zachary, Secretary.

James Miller, Head-Master ; 3 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 615. This number includes 419 children of public schools, paying 25*l.* ; 80 students of private schools, paying 45*l.* ; 20 school-teachers and pupil-teachers, paying 5*l.* 17*s.* 6*d.* ; and 96 students who have attended the Central School, from whom 58*l.* 3*s.* 2*d.* has been received. The total amount of fees has been 134*l.* 0*s.* 8*d.*

The attendance at the classes has been :—Day classes, 40 students, who have paid 3*s.* 4*d.* to 6*s.* 8*d.* per month ; total, 32*l.* 19*s.* 9*d.* Evening classes :—56 students, who have paid 1*s.* 8*d.* per month. The amount of these fees has been 25*l.* 3*s.* 5*d.*

The amount of aid afforded to the school by the Department has been 41*l.* 10*s.* 7*d.*, which sum includes the payments for the master's certificates and other allowances, aid in the purchase of examples, &c.

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CLONMEL.—(Population in 1851—15,662.)

SCHOOLS OF ART. Established in 1854. It is held in the Mechanics' Institute, Anglesea Street.

The officers of the committee of management are :—

Alderman Hackett, J.P., Chairman.

P. J. Purcell, Secretary.

Edward A. Fraser, Head-Master ; 2 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 186, showing a total decrease of 6 since last year. This number includes 124 children of public schools, paying 50*l.* ; 17 school-teachers and pupil-teachers, and 45 students who have attended the Central School, from whom 37*l.* 1*s.* 9*d.* has been received. The total amount of fees has been 87*l.* 1*s.* 9*d.*, showing a decrease of 5*l.* 10*s.* 3*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—12 students, who have paid 6*s.* per month, and an entrance fee of 5*s.* ; total, 19*l.* 0*s.* 6*d.* ; Evening classes—33 students, who have paid 1*s.* to 2*s.* per quarter, and 2*s.* entrance fee. The amount of these fees has been 18*l.* 1*s.* 3*d.*

Eight local medals, 4 second grade rewards, and 16 first grade rewards have been obtained.

The annual inspection and public examination took place in October.

The amount of aid afforded to the school by the Department has been 37*l.* 10*s.* 3*d.*, which sum includes the payments for the master's certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

COALBROOKDALE.—(Population in 1851—15,662.)

Established in 1856.

The officers of the committee of management are :—

Henry Dickinson, Chairman.

William Gregory Norris, Secretary.

James A. Mulligan, Head-Master ; 2 certificates.

J. C. Hartshorn is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 604, showing a total decrease of 10 since last year. This number includes 491 children of public schools, paying 25*l.* ; and 113 students who have attended the Central School, from whom 63*l.* 3*s.* has been received. The total amount of fees has been 88*l.* 3*s.*, showing a decrease of 28*l.* 0*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—27 students, who have paid 12*s.* to 15*s.* per quarter ; total, 35*l.* 14*s.* 6*d.* Evening classes—86 students, who have paid 1*s.* 6*d.* to 3*s.* per quarter. The amount of these fees has been 27*l.* 8*s.* 6*d.*

Six students have qualified themselves for prize-studentships, and have received certificates.

Six local medals, 13 second grade rewards, and 13 first grade rewards have been obtained. The school has expended from its own funds 1*l.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in September.

An exhibition of the students' works took place, and was attended by about 500 visitors.

The amount of aid afforded to the school by the Department has been ^{Appendix E} 76*l.* 18*s.* 11*d.*, which sum includes the payments for the master's ^{SCHOOLS OF ART.} certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

CORK.—(Population in 1851—86,485.)

Established in 1850. It is held in Nelson Place.

The officers of the committee of management are:—

The Mayor, Chairman.

Thomas S. Dunscombe, Secretary.

James Brenan, Head-Master; 4 certificates. °

Elizabeth Max and John T. Morrogh are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 251, showing a total decrease of 721 since last year. This number includes 17 children of public schools, paying 10*l.*; 1 school-teacher, paying 10*s.*; and 233 students who have attended the Central School, from whom 153*l.* has been received. The total amount of fees has been 163*l.* 10*s.*, showing a decrease of 47*l.* from the sum received last year.

The attendance at the classes has been:—Day classes—85 students, who have paid 10*s.* per term; total, 93*l.* 4*s.* Evening classes—148 students, who have paid 5*s.* per term. The amount of these fees has been 59*l.* 16*s.*

Three students have qualified themselves for prize-studentships, and have received certificates.

The school received two Department prizes (10*l.*), with two national medallions; in addition to which 20 local medals, 9 second grade rewards, and 4 first grade rewards have been obtained. The school has expended from its own funds 5*l.* 13*s.* 2*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in October.

An exhibition of the students' works took place, and was attended by about 2,000 visitors.

The amount of aid afforded to the school by the Department has been 117*l.* 15*s.* 4*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

COVENTRY.—(Population in 1851—36,812.)

Established in 1844. It is held at No. 4, St. John's Bridge.

The officers of the committee of management are:—

Lord Leigh, Chairman.

Richard Caldicott, jun., Secretary.

Henry Rafter, Head-Master; 2 certificates.

William Hough Assistant-Master.

James Frost is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 964, showing a total increase of 301 since last year. This number includes 836 children of public schools, paying 69*l.* 16*s.* 3*d.*; 11 school-teachers and pupil-teachers, paying 3*l.* 5*s.*; and 117 students who have attended the Central School, from whom 60*l.* 8*s.* 9*d.* has been received. The total amount of fees has been 133*l.* 10*s.* showing a decrease of 17*l.* 12*s.* 3*d.* from the sum received last year.

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Appendix E. The attendance at the classes has been :—Day classes—44 students, who have paid 2s. and 4s. per month ; total, 25*l.* 17*s.* Evening classes
SCHOOLS OF ART. —73 students, who have paid 2s. per month. The amount of these fees has been 34*l.* 11*s.* 9*d.*

Two students have qualified themselves for prize-studentships, and have received certificates.

The school received two Department prizes (10*l.*), with two national medallions ; in addition to which 16 local medals, 5 second grade rewards, and 11 first grade rewards have been obtained.

The annual inspection and public examination took place in October.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 95*l.* 17*s.*, which sum includes the payments for the masters' certificate and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

DARLINGTON.—(Population in 1851—11,228.)

Established in 1857. It is held in Union Street.

The officers of the committee of management are :—

Henry Pease, M.P., Chairman.

J. P. Pritchett, Secretary.

Samuel Elton, Head-Master ; 2 certificates.

William Woof and James Woodward are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,113, showing a total increase of 4 since last year. This number includes 891 children of public schools, paying 27*l.* ; 40 students of private schools, paying 70*l.* ; 47 school-teachers and pupil-teachers, paying 3*l.* 7*s.* 6*d.* ; and 135 students who have attended the Central School, from whom 102*l.* 12*s.* 9*d.* has been received. The total amount of fees has been 203*l.* 0*s.* 3*d.*, showing an increase of 17*l.* 4*s.* 9*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—19 students, who have paid 1*s.* to 8*s.* per month ; total, 33*l.* 19*s.* Evening classes—116 students, who have paid 2*s.* to 4*s.* per month, and 2*s.* entrance fee. The amount of these fees has been 68*l.* 13*s.* 9*d.*

Four students have qualified themselves for prize-studentships, and have received certificates.

The school received three Department prizes (10*l.*), with three national medallions ; in addition to which 17 local medals, 31 second grade rewards, and 47 first grade rewards have been obtained. The school has expended from its own funds 3*l.* 4*s.* 9*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in January.

An exhibition of the students' works took place, and was attended by about 1,000 visitors.

The amount of aid afforded to the school by the Department has been 162*l.* 9*s.* 4*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

DEVONPORT.—(Population in 1851—21,147.)

Appendix E.

SCHOOLS OF
ART.

Established in 1859. It is held in the Mechanics' Institute.

The officers of the committee of management are:—

N. Wilson, Chairman.

U. H. King and J. C. Radford, Secretaries.

George Wardle, Head-Master; 3 certificates.

William Browning is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 788, showing a total decrease of 69 since last year. This number includes 577 children of public schools, paying 20*l.* 10*s.* 6*d.*; 63 students of private schools, paying 56*l.* 12*s.* 6*d.*; 44 school-teachers and pupil-teachers, paying 6*l.*; and 104 students who have attended the Central School, from whom 97*l.* 9*s.* 2*d.* has been received. The total amount of fees has been 180*l.* 12*s.* 2*d.*, showing an increase of 76*l.* 3*s.* 11*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—39 students, who have paid 4*s.* to 6*s.* per month, and an entrance fee of 2*s.* 6*d.* or 5*s.*; total, 59*l.* 6*s.* 6*d.* Evening classes:—65 students, who have paid from 1*s.* 6*d.* to 2*s.* 6*d.* per quarter, and 1*s.* entrance fee. The amount of these fees has been 38*l.* 2*s.* 8*d.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Seven local medals, 46 second grade rewards, and 29 first grade rewards have been obtained.

The annual inspection and public examination took place in May.

The amount of aid afforded to the school by the Department has been 117*l.* 4*s.* 6*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

DUBLIN.—(Population in 1851—250,000.)

Established in 1849. It is held at the Royal Dublin Society.

The officers of the committee of management are:—

Charles E. Bagot, Chairman.

Dr. E. Steele, Secretary.

Henry Macmanus, Head-Master.

James Healy, Assistant-Master; 1 certificate.

Edward C. Byrne is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 823, showing a total increase of 93 since last year. This number includes 400 children of public schools, paying 13*l.* 10*s.*; and 423 students who have attended the Central School, from whom 303*l.* 18*s.* 7*d.* has been received. The total amount of fees has been 317*l.* 8*s.* 7*d.*, showing a decrease of 42*l.* 12*s.* 11*d.* from the sum received last year.

The attendance at the classes has been:—Day classes—284 students, who have paid 3*s.* to 10*s.* per month, and an entrance fee of 2*s.* 6*d.* to 5*s.*; total, 266*l.* 3*s.* 7*d.* Evening classes—139 students, who have paid 1*s.* 6*d.* and 2*s.* per month, and 1*s.* entrance fee. The amount of these fees has been 37*l.* 15*s.*

Five students have qualified themselves for prize-studentships, and have received certificates.

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Appendix E. The school received two Department prizes (10*l.*), with two national
SCHOOLS OF medallions; in addition to which 25 local medals, 37 second grade rewards,
ART. and 15 first grade rewards have been obtained. The school has expended
from its own funds 17*l.* 8*s.* 4*d.* on account of examples, besides the local
expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in October.

Four exhibitions of the students' works have taken place, and were
attended by 6,520 visitors.

The amount of aid afforded to the school by the Department has
been 33*l.* 8*s.*, which sum includes the payments for the masters'
certificate and other allowances, the payments to Art pupil-teacher, also
the grants on account of the children who obtained rewards, aid in the
purchase of examples, the cost of medals, medallions, &c.

DUDLEY.—(Population in 1851—37,962.)

Established in 1853. It is held in King Street.

The officers of the committee of management are:—

Rev. J. C. Browne, Chairman.

E. F. Smith, Secretary.

Charles T. Sturtevant, Head-Master; 3 certificates.

Thomas Smart and Thomas Hicklin are the pupil-teachers.

The total number receiving instruction in drawing in or through the
agency of the school during 1860 has been 1,072. This number includes
916 children of public schools, paying 25*l.*; 95 students of private schools,
paying 40*l.*; 10 school-teachers and pupil-teachers, paying 1*l.* 10*s.* 6*d.*; and
51 students who have attended the Central School, from whom 30*l.* 2*s.*
has been received. The total amount of fees has been 96*l.* 12*s.* 6*d.*

The attendance at the classes has been:—Day classes—17 students, who
have paid 10*s.* to 2*l.* 2*s.* per session; total, 11*l.* 11*s.* 6*d.* Evening classes—
34 students, who have paid 2*s.* and 2*s.* 6*d.* per month. The amount
of these fees has been 18*l.* 10*s.* 6*d.*

Four local medals, 1 second grade reward, and 12 first grade rewards
have been obtained. The school has expended from its own funds
3*l.* 17*s.* on account of examples, besides the local expenses for rent,
cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in October.

The amount of aid afforded to the school by the Department has been
61*l.* 11*s.* 4*d.*, which sum includes the payments for the master's cer-
tificates and other allowances, the payments to Art pupil-teachers, also
the grants on account of the children who obtained rewards, aid in the
purchase of examples, the cost of medals, &c.

DUNDEE.—(Population in 1851—78,931.)

Established in 1856. It is held at the Public Seminaries, Euclid
Crescent.

The officers of the committee of management are:—

John Sturrock, Chairman.

George Milne, Secretary.

John Kennedy, Head-Master; 3 certificates.

James Spindler, Robert Kinnear, Jemima Hughes, Robert
Cowie, and William Duncan are the pupil-teachers.

The total number receiving instruction in drawing in or through the
agency of the school during 1860 has been 2,362, showing a total increase
of 452 since last year. This number includes 1,956 children of public

schools, paying 35*l.* 6*s.*; 86 school-teachers and pupil-teachers, paying 11*l.*; and 320 students who have attended the Central School, from whom 222*l.* 19*s.* 2*d.* has been received. The total amount of fees has been 269*l.* 5*s.* 2*d.*, showing a decrease of 29*l.* 1*s.* 2*d.* from the sum received last year. Appendix E
SCHOOLS OF
ART.

The attendance at the classes has been:—Day classes—132 students, who have paid 4*s.* per month; total, 148*l.* 19*s.* 10*d.* Evening classes—188 students, who have paid 1*s.* to 2*s.* per month. The amount of these fees has been 73*l.* 19*s.* 4*d.*

Nine students have qualified themselves for prize-studentships, and have received certificates.

Seventeen local medals, 82 second grade rewards, and 139 first grade rewards have been obtained. The school has expended from its own funds 20*l.* 2*s.* 8*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in July.

Two exhibitions of the students' works took place, and were attended by about 3,000 visitors.

The amount of aid afforded to the school by the Department has been 291*l.* 8*s.* 4*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

DURHAM.—(Population in 1851—13,188.)

Established in 1853. It is held in Saddler Street.

The officers of the committee of management are:—

J. Bramwell, Chairman.

Rev. W. Greenwell, Secretary.

George Newton, Head-Master; 3 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 548, showing a total increase of 13 since last year. This number includes 393 children of public schools, paying 5*l.*; 46 students of private schools, paying 25*l.*; 12 school-teachers and pupil-teachers, paying 3*l.* 9*s.*; and 97 students who have attended the Central School, from whom 115*l.* 11*s.* 6*d.* has been received. The total amount of fees has been 149*l.* 0*s.* 6*d.*, showing a decrease of 17*l.* 11*s.* 6*d.* from the sum received last year.

The attendance at the classes has been:—Day classes—40 students, who have paid 4*s.* 2*d.* and 8*s.* 4*d.* per month, and an entrance fee of 1*s.*; total, 75*l.* 4*s.* Evening classes—57 students, who have paid 2*s.* per quarter, and 2*s.* entrance fee. The amount of these fees has been 40*l.* 7*s.* 6*d.*

Three students have qualified themselves for prize-studentships, and have received certificates.

Eleven local medals, 11 second grade rewards, and 12 first grade rewards have been obtained. The school has expended from its own funds 12*l.* 14*s.* 7½*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

The amount of aid afforded to the school by the Department has been 72*l.*, which sum includes the payments for the master's certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

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Appendix E.

EDINBURGH.—(Population in 1851—160,000.)

SCHOOLS OF
ART.

Established in 1858. It is held in the Royal Institution.

The officers of the committee of management are :—

- The Board of Manufactures.
The Hon. B. F. Primrose, Secretary.
Robert S. Lauder, John Ballantyne, E. W. Dallas, and
William A. Morley, 4 certificates; Masters.
Susan A. Ashworth, Mistress; 2 certificates.
- Isabella Byres is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 2,014, showing a total increase of 237 since last year. This number includes 1,535 children of public schools, paying 127*l.* 10*s.*; 137 school-teachers and pupil-teachers, paying 30*l.* 12*s.* 6*d.*; and 342 students who have attended the Central School, from whom 440*l.* 19*s.* 2*d.* has been received. The total amount of fees has been 599*l.* 1*s.* 8*d.*, showing an increase of 54*l.* 6*s.* 2*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—151 students, who have paid 2*s.* 6*d.* per month, and an entrance fee of 5*s.* to 2*l.* 10*s.*; total, 291*l.* 1*s.* 8*d.* Evening classes—191 students, who have paid 2*s.* 6*d.* per quarter, and 2*s.* 6*d.* to 10*s.* entrance fee. The amount of these fees has been 149*l.* 17*s.* 6*d.*

Four students have qualified themselves for prize-studentships, and have received certificates.

Eighteen local medals, 27 second grade rewards, and 25 first grade rewards have been obtained. The school has expended from its own funds 22*l.* 12*s.* 11*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in July.

An exhibition of the students' works took place, and was attended by 2,135 visitors.

The amount of aid afforded to the school by the Department has been 882*l.* 19*s.* 7*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

EXETER.—(Population in 1851—40,000.)

Established in 1854. It is held in High Street.

The officers of the committee of management are :—

- Sir Stafford H. Northcote, Bart., C.B., Chairman.
- W. Miles and C. Wescomb, Secretaries.
- Montague Wigzell, Head-Master; 1 certificate.
- W. F. Cross, John C. Nevett, and John M. Pinn are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,392, showing a total increase of 201 since last year. This number includes 1,080 children of public schools, paying 40*l.*; 29 school-teachers and pupil-teachers, paying 7*l.* 3*s.* 9*d.*; and 283 students who have attended the Central School, from whom 206*l.* 8*s.* 3*d.* has been received. The total amount of fees has been 253*l.* 12*s.*, showing a decrease of 78*l.* 10*s.* 6*d.* the from sum received last year.

The attendance at the classes has been :—Day classes—68 students, who have paid 7s. per month, and an entrance fee of 5s.; total, 136*l.* 8s. Evening classes—215 students, who have paid 1s. and 2s. per quarter, and 2s. entrance fee. The amount of these fees has been 70*l.* 0s. 3*d.* Appendix E.
SCHOOLS OF
ART.

One student has qualified himself for a prize-studentship, and has received a certificate.

The school received two Departments prizes (10*l.*), with two national medallions; in addition to which 12 local medals, 17 second grade rewards, and 116 first grade rewards have been obtained. The school has expended from its own funds 9s. on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in May.

An exhibition of the students' works took place, and was attended by 1,693 visitors.

The amount of aid afforded to the school by the Department has been 164*l.* 9s. which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

GLASGOW.—(Population in 1851—400,000.)

Established in 1845. It is held at 16, Ingram Street.

The officers of the committee of management are :—

Sir Archibald Alison, Bart., Chairman.

James A. Campbell, Secretary.

Charles H. Wilson, Head-Master.

Robert Greenlees, Edmund Lyne (3 certificates), James Howden, and David Thomson, Assistant-Masters.

Miss Patrick, Assistant-Mistress.

Thomson Kirkwood, John Dingwall, and James Greenlees are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 3,946, showing a total increase of 836 since last year. This number includes 3,047 children of public schools, paying 105*l.* 5s.; 110 school-teachers and pupil-teachers, paying 25*l.* 19s.; and 789 students who have attended the Central School, from whom 463*l.* 3s. has been received. The total amount of fees has been 594*l.* 7s., showing an increase of 64*l.* 2s. 6*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—415 students, who have paid from 2s. to 7s. per month, and an entrance fee of 1s. and 2s.; total, 230*l.* 8s. 6*d.* Evening classes—374 students, who have paid 1s. to 3s. per quarter, and 1s. entrance fee. The amount of these fees has been 232*l.* 14s. 6*d.*

Four students have qualified themselves for prize-studentships, and have received certificates.

The school received three Department prizes (10*l.*), with three national medallions; in addition to which 22 local medals, 35 second grade rewards, and 36 first grade rewards have been obtained. The school has expended from its own funds 7*l.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June

An exhibition of the students' works took place, and was attended by about 1,500 visitors.

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Appendix E. The amount of aid afforded to the school by the Department has been
SCHOOLS OF 61*l.* 7*s.* 10*d.*, which sum includes the payments for the masters' cer-
Avt. tificates and other allowances, the payments to Art pupil-teachers, also the
grants on account of the children who obtained rewards, aid in the pur-
chase of examples, the cost of medals, medallions, &c.

GLOUCESTER.—(Population in 1851—26,308.)

Established in 1859. It is held in Longsmith Street.

The officers of the committee of management are :

T. Gambier Parry, Chairman.

Rev. C. Y. Crawley, Secretary.

John Kemp, Head-Master; 3 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 183, showing a total increase of 19 since last year. This number includes 70 children of public schools, paying 5*l.*; 38 school-teachers and pupil-teachers, paying 4*l.* 17*s.* 6*d.*, and 75 students who have attended the Central School, from whom 75*l.* 15*s.* 6*d.* has been received. The total amount of fees has been 85*l.* 13*s.*, showing an increase of 12*l.* 3*s.* over the sum received last year.

The attendance at the classes has been :—Day classes—31 students, who have paid 15*s.* per quarter; total 52*l.* 4*s.* 6*d.* Evening classes—44 students, who have paid 5*s.* per quarter. The amount of these fees has been 23*l.* 11*s.*

Two local medals, 7 second grade rewards, and 17 first grade rewards have been obtained.

The annual inspection and public examination took place in May.

The amount of aid afforded to the school by the Department has been 32*l.* 13*s.* 2*d.*, which sum includes the payments for the master's certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

GREENOCK.—(Population in 1851—40,000.)

Established in 1857. It is held in the old Town Hall, Hamilton Street.

The officers of the committee of management are :—

T. O. Hunter, Chairman.

Alexander Mackenzie, Secretary.

Daniel Urie, Head-Master; 2 certificates.

Walter Yuill is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 613, showing a total increase of 14 since last year. This number includes 509 children of public schools, paying 154*l.* 10*s.*; 12 school-teachers and pupil-teachers, paying 1*l.* 2*s.*; and 92 students who have attended the Central School, from whom 29*l.* 8*s.* 6*d.* has been received. The total amount of fees has been 185*l.* 0*s.* 6*d.*, showing a decrease of 16*l.* 14*s.* from the sum received last year.

The attendance at the evening classes—92 students, who have paid 4*s.* 6*d.* and 6*s.* per quarter. The amount of these fees has been 29*l.* 8*s.* 6*d.*

Two students have qualified themselves for prize-studentships, and have received certificates.

The school received one Department prize (10*l.*), with one national medalion; in addition to which 12 local medals, 2 second grade rewards, and 7 first grade rewards have been obtained.

The annual inspection and public examination took place in June. Appendix E.

An exhibition of the students' works took place and was attended by about 800 visitors. SCHOOLS OF ART.

The amount of aid afforded to the school by the Department has been 74*l.* 17*s.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

GUILDFORD.—(Population in 1851—17,686.)

Established in 1858. It is held at Puley Hill.

The officers of the committee of management are:—

W. Bovill, M.P., Chairman.

Rev. R. B. Matthews, Secretary.

Charles C. Pyne, Head-Master; 1 certificate.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 535, showing a total decrease of 166 since last year. This number includes 450 children of public schools, paying 10*l.*; 15 school-teachers and pupil-teachers, paying 3*l.*; and 70 students who have attended the Central School, from whom 4*l.* 10*s.* 6*d.* has been received. The total amount of fees has been 17*l.* 10*s.* 6*d.*, showing a decrease of 8*l.* 14*s.* 6*d.* from the sum received last year.

Evening classes—70 students. The amount of these fees has been 4*l.* 10*s.* 6*d.*

Two local medals, 5 second grade rewards and 20 first grade rewards have been obtained. The school has expended from its own funds 6*l.* 4*s.* 5*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

The amount of aid afforded to the school by the Department has been 20*l.* 18*s.*, which sum includes the payments for the master's certificate and other allowances, also the grant on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

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HANLEY.—(Population in 1851—35,000.)

Established in 1847. It is held in the British and Foreign School.

The officers of the committee of management are:—

Francis Wedgwood, Chairman.

Edwin Powell, Secretary.

C. D. Hodder, Head-Master; 2 certificates.

H. Protat, Modelling-Master; 1 certificate.

Reuben Lees and William Brock are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 718, showing a total increase of 42 since last year. This number includes 536 children of public schools, paying 5*l.*; 18 students of private schools, paying 24*l.*; 5 school-teachers and pupil-teachers; and 159 students who have attended the Central School, from whom 11*l.* 12*s.* 3*d.* has been received. The total amount of fees has been 140*l.* 12*s.* 3*d.*, showing an increase of 25*l.* 2*s.* over the sum received last year.

The attendance at the classes has been:—Day classes—37 students, who have paid 1*s.* 6*d.* and 6*s.* per month; total, 44*l.* 12*s.* 6*d.* Evening classes—122 students, who have paid 1*s.* 6*d.* and 2*s.* per month. The amount of these fees has been 66*l.* 19*s.* 9*d.*

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Appendix E. Two students have qualified themselves for prize-studentships, and have received certificates.

SCHOOLS OF ART.

The school received five Department prizes (10*l.*), with seven national medallions; in addition to which 21 local medals, 22 second grade rewards, and 13 first grade rewards have been obtained. The school has expended from its own funds 3*l.* 6*s.* 4*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in February.

An exhibition of the students' works took place, and was attended by 850 visitors.

The amount of aid afforded to the school by the Department has been 195*l.* 5*s.* 6*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

HALIFAX.—(Population in 1851—40,000.)

Established in 1859. It is held in the Mechanics' Hall.

The officers of the committee of management are :—

James Dennison, Chairman.

Louis H. Child, Secretary.

Andrew Stevenson, Head-Master; 2 certificates.

R. Ireland Stevenson is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 446, showing a total decrease of 351 since last year. This number includes 237 children of public schools, paying 12*l.* 10*s.*; 30 students of private schools, paying 35*l.*; 70 school-teachers and pupil-teachers, paying 20*l.* 15*s.*; and 109 students who have attended the Central School, from whom 56*l.* 16*s.* 6*d.* has been received. The total amount of fees has been 125*l.* 1*s.* 6*d.*, showing a decrease of 21*l.* 2*s.* 10*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—11 students, who have paid 12*s.* 6*d.* per quarter; total, 10*l.* 0*s.* 6*d.* Evening classes—98 students, who have paid 2*s.* to 5*s.* per quarter. The amount of these fees has been 46*l.* 16*s.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Five local medals, 12 second grade rewards, and 9 first grade rewards have been obtained. The school has expended from its own funds 2*l.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in May.

An exhibition of the students' works took place, and was attended by 720 visitors.

The amount of aid afforded to the school by the Department has been 75*l.* 10*s.* 8*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

HEREFORD.—(Population in 1851—12,108.)

Established in 1853. It is held in the National Schools.

The officers of the committee of management are :—

The Very Rev. the Dean, Chairman.

J. T. O. Fowler, Secretary.

R. B. Bustin, Head-Master; 1 certificate.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 393, showing a total increase

of 13 since last year. This number includes 340 children of public schools, paying 70*l.*; 18 students of private schools, paying 30*l.*; 8 school-teachers and pupil-teachers, paying 1*l.*; and 27 students who have attended the Central School, from whom 7*l.* has been received. The total amount of fees has been 103*l.*, showing a decrease of 1*l.* 15*s.* from the sum received last year.

Evening classes—27 students, who have paid 2*s.* per month. The amount of these fees has been 7*l.*

One local medal, 7 second grade rewards, and 12 first grade rewards have been obtained.

The annual inspection and public examination took place in October. The amount of aid afforded to the school by the Department has been 20*l.* 7*s.*, which sum includes the payments for the master's certificate and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medal, &c.

HUDDERSFIELD.—(Population in 1851—30,880.)—(See LEEDS.)
Established in 1859.

IPSWICH.—(Population in 1851—33,000.)

Established in 1859. It is held in Northgate Street.

The officers of the committee of management are :—

Rev. C. H. Gaye, M.A., Chairman.

S. C. E. Bacon, Secretary.

W. T. Griffiths, Head-Master; 3 certificates.

Charles J. Smart and John H. Tumner are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,070, showing a total decrease of 73 since last year. This number includes 799 children of public schools, paying 28*l.* 15*s.* 6*d.*; 30 students of private schools, paying 50*l.*; 61 school-teachers and pupil-teachers, paying 8*l.* 5*s.*; and 180 students who have attended the Central School, from whom 180*l.* 0*s.* 10*d.* has been received. The total amount of fees has been 267*l.* 1*s.* 4*d.*, showing an increase of 6*l.* 12*s.* 4*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—30 students, who have paid 6*s.* and 10*s.* 6*d.* per month, and an entrance fee of 3*s.* and 5*s.*; total, 101*l.* 19*s.* 10*d.* Evening classes—150 students, who have paid 2*s.* per month, and 2*s.* entrance fee. The amount of these fees has been 78*l.* 1*s.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Eight local medals, 28 second grade rewards, and 12 first grade rewards have been obtained. The school has expended from its own funds 13*l.* 1*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in February.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 112*l.* 7*s.* 6*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, in the cost of medals, &c.

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LANCASTER.—(Population in 1851—34,660.)

SCHOOLS OF
ART.

Established in 1856. It is held at Castle Hill.

The officers of the committee of management are:—

The Mayor, Chairman.

William Whelon, Secretary.

Herbert Gilbert, Head-Master; 2 certificates.

Albert Gilmour is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 958, showing a total increase of 248 since last year. This number includes 778 children of public schools, paying 13*l.* 17*s.*; 41 school-teachers and pupil-teachers, paying 10*l.* 5*s.*; and 139 students who have attended the Central School, from whom 173*l.* 5*s.* has been received. The total amount of fees has been 197*l.* 7*s.*, showing an increase of 29*l.* 4*s.* over the sum received last year.

The attendance at the classes has been:—Day classes—73 students who have paid 2*s.* and 4*s.* per month; total, 115*l.* 1*s.* Evening classes—66 students, who have paid 1*s.* to 4*s.* per month. The amount of these fees has been 58*l.* 4*s.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Eight local medals, 19 second grade rewards, and 15 first grade rewards have been obtained.

The annual inspection and public examination took place in June.

An exhibition of the students' works took place, and was attended by about 100 visitors.

The amount of aid afforded to the school by the Department has been 77*l.* 17*s.* 6*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals,&c.

LEEDS (with Branch at HUDDERSFIELD).

(Population in 1851—172,270.)

Established in 1846. It is held at the Mechanics' Institute.

The officers of the committee of management are:—

Peter O'Callaghan, Chairman.

John Pickering, Secretary.

Charles Ryan, Head-Master; 2 certificates.

Walter Smith, Assistant-Master; 3 certificates.

William Sturgeon and Daniel Smith are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 3,447, showing a total increase of 1,482 since last year. This number includes 2,392 children of public schools, paying 57*l.* 5*s.*; 604 students of private schools, paying 217*l.* 10*s.*; 178 school-teachers and pupil-teachers, paying 47*l.* 16*s.*; and 273 students who have attended the Central School, from whom 64*l.* 6*s.* 10*d.* has been received. The total amount of fees has been 386*l.* 17*s.* 10*d.*, showing an increase of 158*l.* 9*s.* 1*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—32 students, who have paid 3*s.* 6*d.* per month, and an entrance fee of 1*s.*; total, 32*l.* 10*s.* 7*d.* Evening classes—241 students, who have paid 1*s.* 6*d.* to 2*s.* per quarter, and 1*s.* entrance fee. The amount of these fees has been 31*l.* 16*s.* 3*d.*

One student has qualified himself for a prize-studentship, and has received a certificate.

Twenty local medals, 33 second grade rewards, and 104 first grade rewards have been obtained. The school has expended from its own funds 13*l.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in May.

An exhibition of the students' works took place, and was attended by about 300 visitors.

The amount of aid afforded to the school by the Department has been 202*l.* 11*s.* 5*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

LIMERICK.—(Population in 1851—55,268.)

Established in 1852. It is held at the Athenæum, Cecil Street.

The officers of the committee of management are:—

Daniel Griffin, M.D., Chairman.

William Lysaght, Secretary.

Nicholas Brophy, Head-Master; 3 certificates.

Henry O'Shea is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 404, showing a total decrease of 39 since last year. This number includes 320 children of public schools, paying 49*l.*; 15 school-teachers and pupil-teachers, and 69 students who have attended the Central School, from whom 88*l.* 13*s.* 3*d.* has been received. The total amount of fees has been 137*l.* 13*s.* 3*d.*, showing an increase of 28*l.* 14*s.* 9*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—28 students, who have paid 1*l.* per quarter; total, 64*l.* 13*s.* 3*d.* Evening classes—41 students, who have paid 5*s.* and 10*s.* per quarter. The amount of these fees has been 24*l.*

One student has qualified himself for a prize-studentship, and has received a certificate.

Eleven local medals, 5 second grade rewards, and 7 first grade rewards have been obtained. The school has expended from its own funds 28*l.* 19*s.* 2*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in October.

The amount of aid afforded to the school by the Department has been 78*l.* 6*s.* 4*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

LIVERPOOL (NORTH).—(Population in 1851—375,955.)

Established in 1855. It is held in the Collegiate Institution, Shaw Street.

The officers of the committee of management are:—

Rev. J. S. Howson, Chairman.

J. Gregory Jones, Secretary.

William J. Bishop, Head-Master.

Samuel Burkinshaw, Assistant-Master; 3 certificates.

Jane Brown is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,753, showing a total increase of 30 since last year. This number includes 1,474 children of

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Appendix E. public schools, paying 300*l.*; 30 students of private schools paying 56*l.*; 153 school-teachers and pupil-teachers, paying 52*l.* 13*s.* 3*d.*; and 96 **SCHOOLS OF ART.** students who have attended the Central School, from whom 30*l.* 7*s.* 3*d.* has been received. The total amount of fees has been 439*l.* 0*s.* 6*d.*, showing a decrease of 26*l.* 15*s.* from the sum received last year.

The attendance at the evening classes—96 students, who have paid 6*s.* 6*d.* per quarter. The amount of these fees has been 30*l.* 7*s.* 3*d.*

Six local medals, 24 second grade rewards, and 62 first grade rewards have been obtained.

The annual inspection and public examination took place in June.

An exhibition of the students' works took place and was attended by about 1,200 visitors.

The amount of aid afforded to the school by the Department has been 95*l.* 8*s.* 6*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

LIVERPOOL (SOUTH).—(Population in 1851—375,955.)

Established in 1855. It is held in the Liverpool Institute, Mount Street.

The officers of the committee of management are :—

Peter G. Heyworth, Chairman.

Astrup Cariss, Secretary.

John Finnie, Head-Master; 3 certificates.

Ephraim Pugh, Assistant-Master.

Emma Gammage and Thomas M. Lindsay are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,925, showing a total increase of 212 since last year. This number includes 1,618 children of public schools, paying 190*l.*; 57 school-teachers and pupil-teachers, paying 6*l.* 7*s.* 6*d.*; and 250 students who have attended the Central School, from whom 178*l.* 10*s.* 8*d.* has been received. The total amount of fees has been 374*l.* 18*s.* 2*d.*, showing a decrease of 12*l.* 1*s.* 2*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—36 students, who have paid 7*s.* per month; total, 77*l.* 9*s.* Evening classes—214 students, who have paid 2*s.* 2*d.* per month. The amount of these fees has been 101*l.* 1*s.* 8*d.*

Four students have qualified themselves for a prize-studentship, and have received certificates.

The school received one Department prize (10*l.*), with one national medallion; in addition to which 13 local medals, 18 second grade rewards, and 28 first grade rewards have been obtained. The school has expended from its own funds 5*l.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 140*l.* 4*s.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

LLANELLY.—(Population in 1851—23,507.)

Appendix E
SCHOOLS OF
ART.

Established in 1854. It is held at the Athenæum, Church Street.

The officers of the committee of management are :—

C. W. Nevel, Chairman.

S. Bevan and Joshua Buckley are the Secretaries.

F. F. Hosford, Head-Master; 2 certificates.

Thomas Morgan is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 822. This number includes 780 children of public schools, paying 30*l.*; 15 students of private schools, paying 30*l.*; 10 school-teachers and pupil-teachers, paying 11*s.*; and 17 students who have attended the Central School, from whom 11*l.* 6*s.* 9*d.* has been received. The total amount of fees has been 71*l.* 17*s.* 9*d.*

The attendance at the evening classes,—17 students, who have paid 1*s.* and 2*s.* per month. The amount of these fees has been 11*l.* 6*s.* 9*d.*

The school received 5 second grade rewards, and 10 first-grade rewards.

The annual inspection and public examination took place in November.

An exhibition of the students' works took place, and was attended by 100 visitors.

The amount of aid afforded to the school by the Department has been 23*l.* 6*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in purchase of examples, the cost of medals, &c.

MACCLESFIELD.—(Population in 1851—39,048.)

Established in 1851. It is held in the Mechanics' Institute, Park Green.

The officers of the committee of management are :—

The Mayor, Chairman.

William Jeffery, Secretary.

Geo. Stewart, Head-Master.

Z. Pritchard, H. Johnson, and R. Hassall are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,188, showing a total increase of 395 since last year. This number includes 1,009 children of public schools, paying 32*l.* 10*s.*; 41 students of private schools, paying 59*l.* 10*s.*; 23 school-teachers and pupil-teachers, paying 2*l.* 1*s.*; and 115 students who have attended the Central School, from whom 37*l.* 6*s.* 7½*d.* has been received. The total amount of fees has been 131*l.* 7*s.* 7½*d.*, showing a decrease of 7*s.* 5½*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—25 students, who have paid 3*s.* 6*d.* per month; total, 13*l.* 8*s.* 9*d.* Evening classes—90 students, who have paid 1*s.* and 1*s.* 6*d.* per month. The amount of these fees has been 23*l.* 17*s.* 10½*d.*

Four students have qualified themselves for prize-studentships, and have received certificates.

The school received three Department prizes (10*l.*), with three national medallions; in addition to which 10 local medals, 37 second grade rewards, and 15 first grade rewards have been obtained. The school has expended from its own funds 5*l.* 18*s.* 9*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

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Appendix E. The annual inspection and public examination took place in January.
SCHOOLS OF ART.

Two exhibitions of the students' works took place during the year, and were attended by 2,160 visitors.

The amount of aid afforded to the school by the Department has been 320*l.* 4*s.* 4*d.*, which sum includes the master's allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost medals, medallions, &c.

MANCHESTER.—(Population in 1851—316,213.)

Established in 1842. It is held in the Royal Institution, Bond Street.

The officers of the committee of management are:—

Robert N. Phillips, Chairman.

Richard Aspden, Secretary.

James A. Hammersley, Head-Master.

John Evans, Robert Routledge (2 certificates), John Rowe (2 certificates), Assistant-Masters.

Eliza Hunt, Julianna C. Shepherd, Sarah J. Norris, James Buckham, and Henry Meesham are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 6,064, showing a total decrease of 288 since last year. This number includes 5,459 children of public schools, paying 200*l.*; 143 students of private schools, paying 392*l.*; 177 school-teachers and pupil-teachers, paying 83*l.* 8*s.*; and 285 students who have attended the Central School, from whom 394*l.* 5*s.* 9*d.* has been received. The total amount of fees has been 1,069*l.* 13*s.* 9*d.*, showing an increase of 517*l.* 13*s.* 9*d.* over the sum received last year.

The attendance at the classes has been:—Day-classes—106 students, who have paid from 6*s.* to 2*l.* 2*s.* per quarter, and an entrance fee of from 2*s.* to 10*s.* 6*d.*; total 173*l.* 10*s.* Evening classes—179 students who have paid from 3*s.* to 10*s.* 6*d.* per quarter, and from 1*s.* to 3*s.* entrance fee. The amount of these fees has been 220*l.* 15*s.* 9*d.*

Four students have qualified themselves for prize-studentships and have received certificates.

The school received three Department prizes (10*l.*), with three national medallions; in addition to which 30 local medals; 42 second grade rewards, and 190 first grade rewards have been obtained. The school has expended from its own funds 5*l.* 13*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in December.

An exhibition of the students' works took place in May, and was attended by 2,210 visitors.

The amount of aid afforded to the school by the Department has been 751*l.* 3*s.* 5*d.*, which sum includes the payment for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

METROPOLIS.—(Population in 1851—2,362,236.)

An account of the District Schools receiving instruction in drawing under the superintendence of the Head-Master of the Training School, which are practising schools for the masters and mistresses, will be found in the Head-Master's report, Appendix D., p. 47. In addition to these, the following Schools of Art are established in London:—

FEMALE SCHOOL.

Appendix E.
SCHOOLS OF
ART.

Established in 1842. Held at 43, Queen's Square, Bloomsbury.

The officers of the committee of management are :—

Rev. Anthony W. Thorold, Chairman.

Louisa Gann, Secretary and Head-Mistress ; 1 certificate.

Katherine Wilson (1 certificate), Laure de la Belinaye (1 certificate), Helena Wilson (2 certificates), Assistant-Mistresses.

J. B. Williamson, Assistant-Master ; 2 certificates.

Augusta Wells is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 159, showing a total decrease of 74 since last year. This number includes 6 school-teachers and pupil-teachers, paying 1*l.* 10*s.* ; and 153 students who have attended the Central School, from whom 269*l.* 4*s.* 6*d.* has been received. The total amount of fees has been 270*l.* 14*s.* 6*d.*, showing a decrease of 11*l.* 1*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day-classes—113 students, who have paid 249*l.* 4*s.* 6*d.* Evening-classes—40 students, who have paid 20*l.*

Five students have qualified themselves for prize-studentships and have received certificates.

The school received two department prizes (10*l.*), with two national medallions ; in addition to which 26 local medals and 28 second grade rewards have been obtained.

The annual inspection and public examination took place in March.

An exhibition of the students' work took place, and was attended by 454 visitors.

The amount of aid afforded to the school by the Department has been 310*l.* 8*s.* 3*d.*, which sum includes the payments for the mistresses' and master's certificates and other allowances, the payments to Art pupil-teacher, aid in the purchase of examples, the costs of medals, medallions, &c.

LAMBETH.

Established in 1854. It is held at Prince's Road.

The officers of the committee of management are :—

Rev. Robert Gregory, Chairman.

Messrs. Linton and Sparkes, Secretaries.

John Sparkes, Head-Master ; 4 certificates.

Henry James Dennis is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 838. This number includes 570 children of public schools, paying 20*l.* ; 36 school-teachers and pupil-teachers, paying 6*l.* ; and 232 students who have attended the Central School, from whom 99*l.* 13*s.* has been received. The total amount of fees has been 125*l.* 13*s.*

The attendance at the evening classes—232 students, who have paid 1*s.* and 2*s.* per quarter, and 2*s.* entrance fees. The amount of these fees has been 99*l.* 13*s.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Twelve local medals, 27 second grade rewards, and 27 first grade rewards have been obtained.

The annual inspection and public examination took place in March.

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Appendix E. The amount of aid afforded to the school by the Department has been 90*l.* 16*s.* 10*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

ST. MARTIN'S.

Established in 1854. It is held in Castle Street, Long Acro.

The officers of the committee of management are :—

Rev. W. G. Humphry, Chairman.

Rev. R. G. Maul, Secretary.

W. L. Casey, Head-Master; 3 certificates.

E. Stanley Burchett, Assistant-Master; 3 certificates.

William Trego is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of this school during 1860 has been 1,424, showing an increase of 281 since last year. This number includes 1,073 children of public schools, paying 47*l.* 10*s.*; and 351 students who have attended the Central School, from whom 216*l.* 16*s.* has been received. The total amount of fees has been 264*l.* 6*s.*, showing an increase of 178*l.* 2*s.* over the sum received last year.

The attendance at the evening classes has been 351 students, who have paid 2*s.* and 4*s.* per quarter, and 2*s.* entrance fee. The amount of these fees has been 216*l.* 16*s.*

The school received one Department prize (10*l.*), with one national medallion; in addition to which 22 local medals, 55 second grade rewards, and 96 first grade rewards have been obtained. The school has expended from its own funds 16*l.* 8*s.* 7*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in March.

The amount of aid afforded to the school by the Department has been 177*l.* 4*s.* 4*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

NEWCASTLE-UNDER-LYME.—(Population in 1851—10,569.)

Established in 1853. It is held in Brunswick Street.

The officers of the committee of management are :—

Rev. John Samuel Broad, Chairman.

James Jennings, Secretary.

Joseph P. Bacon, Head-Master; 2 certificates.

George Rhead is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 430, showing a total increase of 18 since last year. This number includes 330 children of public schools, paying 10*l.*; 13 school-teachers and pupil-teachers, paying 3*l.* 17*s.* 3*d.*; and 87 students who have attended the Central School, from whom 44*l.* 4*s.* has been received. The total amount of fees has been 58*l.* 1*s.* 3*d.*, showing a decrease of 5*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—10 students, who have paid 30*s.* per session of 5 months; total, 16*l.* Evening classes—77 students, who have paid 1*s.* 6*d.* and 1*s.* 9*d.* per month. The amount of these fees has been 28*l.* 4*s.*

Two students have qualified themselves for prize-studentships, and Appendix E. have received certificates.

Eight local medals, 11 second grade rewards, and 22 first grade rewards have been obtained. The school has expended from its own funds 2*l.* 13*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

SCHOOLS OF
ART.

The annual inspection and public examination took place in February.

Two exhibitions of the students' works took place, and were attended by about 700 visitors.

The amount of aid afforded to the school by the Department has been 78*l.* 1*s.* 1*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

NEWCASTLE-UPON-TYNE.—(Population in 1851—87,784.)

Established in 1844. It is held in the Museum Buildings, Westgate Street.

The officers of the committee of management are :—

Joseph Watson, Chairman.

James Leathart, Secretary.

William B. Scott, Head-Master.

John Lord, Assistant-Master; 2 certificates.

Bartholomew Boulton, Frederick W. Rich, and Thomas G. Bowman are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,400, showing a total decrease of 349 since last year. This number includes 1,019 children of public schools, paying 80*l.* 12*s.*; 7 students of private schools, paying 15*l.*; 26 school-teachers and pupil-teachers, paying 5*l.* 3*s.* 8*d.*; and 348 students who have attended the Central School, from whom 154*l.* 13*s.* has been received. The total amount of fees has been 255*l.* 8*s.* 8*d.*, showing a decrease of 10*l.* 1*s.* 0½*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—67 students who have paid 2*s.* to 7*s.* per quarter; total 44*l.* 3*s.* Evening classes—281 students, who have paid 8*d.* per month. The amount of these fees has been 110*l.* 10*s.*

Five students have qualified themselves for prize-studentships, and have received certificates.

The school received two Department prizes (10*l.*), with two national medallions; in addition to which 14 local medals, 16 second grade rewards, and 30 first grade rewards have been obtained. The school has expended from its own funds 10*l.* 2*s.* 5*d.* on account of examples; besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

An exhibition of the students' works took place, and was attended by 591 visitors.

The amount of aid afforded to the school by the Department has been 291*l.* 5*s.* 8*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

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NORWICH.—(Population in 1851—70,000.)

SCHOOLS OF
ART.

Established in 1846. It is held in Broad Street, St. Andrew's.

The officers of the committee of management are :—

The Mayor, Chairman.

F. T. Keith, Secretary.

Robert Cochrané, Head-Master ; 3 certificates.

Charlotte Cartwright, George Gosnold, and Wm. John Howard
are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,320, showing a total decrease of 45 since last year. This number includes 1,088 children of public schools, paying 29*l.* ; 28 school-teachers and pupil-teachers, paying 5*l.* 10*s.* and 204 students who have attended the Central School, from whom 121*l.* 6*s.*, has been received. The total amount of fees has been 155*l.* 16*s.* showing an increase of 20*l.* 15*s.* 3*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—60 students, who have paid 15*s.* to 30*s.* per session ; total, 49*l.* 19*s.* 6*d.* Evening classes—144 students, who have paid 1*s.* to 3*s.* per month, and 1*s.* to 3*s.* entrance fee. The amount of these fees has been 71*l.* 6*s.* 6*d.*

One student has qualified himself for a prize-studentship, and has received a certificate.

Four local medals, 22 second grade rewards, and 51 first grade rewards have been obtained. The school has expended from its own funds 3*l.* 0*s.* 3*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in March.

The amount of aid afforded to the school by the Department has been 137*l.* 17*s.* 10*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

NOTTINGHAM.—(Population in 1851—85,000.)

Established in 1843. It is held in Stoney Street.

The officers of the committee of management are :—

Lewis Heymann, Chairman.

William Richards, Secretary.

Frederick R. Fussell, Head-Master ; 1 certificate.

Joseph Fussell, Assistant Master.

Henry L. Roberts and Hovey Merrin are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,971, showing a total increase of 116 since last year. This number includes 1,765 children of public schools, paying 40*l.* ; 19 school-teachers and pupil-teachers, paying 1*l.* 19*s.* 6*d.* ; and 187 students who have attended the Central School, from whom 111*l.* 19*s.* has been received. The total amount of fees has been 153*l.* 18*s.* 6*d.*, showing a decrease of 7*l.* 4*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—31 students, who have paid 12*s.* per quarter, and an entrance fee of 5*s.* ; total, 34*l.* Evening classes—156 students, who have paid 2*s.* per month, and 2*s.* 6*d.* entrance fee. The amount of these fees has been 77*l.* 19*s.*

The school received one Department prize (10*l.*), with one national medallion; in addition to which 12 local medals, 55 second grade rewards, and 117 first grade rewards have been obtained. Appendix E.
SCHOOLS OF ART.

The annual inspection and public examination took place in February. The amount of aid afforded to the school by the Department has been 278*l.* 17*s.* 2*d.*, which sum includes the payments for the masters' certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

PAISLEY.—(Population in 1851—48,000.)

Established in 1848. It is held in Gilmour Street.

The officers of the committee of management are:—

David Murray, Chairman.

William Hodge, Secretary.

William Stewart, Head-Master.

John Broom, James M'Farlane, and Charles Ways are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 742, showing a total increase of 10 since last year. This number includes 620 children of public schools, paying 11*l.* 5*s.*; 18 school-teachers and pupil-teachers, paying 3*l.* 16*s.*; and 104 students who have attended the Central School, from whom 53*l.* has been received. The total amount of fees has been 68*l.* 1*s.*, showing a decrease of 8*l.* 12*s.* 6*d.* from the sum received last year.

The attendance at the classes has been:—Day classes—18 students, who have paid 4*s.* per month; total, 11*l.* 19*s.* Evening classes—86 students, who have paid 2*s.* and 3*s.* 6*d.* per month. The amount of these fees has been 41*l.* 1*s.*

Two students have qualified themselves for prize-studentships, and have received certificates.

The school received five Department prizes (10*l.*), with five national medallions; in addition to which 12 local medals, 12 second grade rewards, and 10 first grade rewards have been obtained. The school has expended from its own funds 2*l.* 12*s.* 4*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

An exhibition of the students' works took place, and was attended by about 300 visitors.

The amount of aid afforded to the school by the Department has been 388*l.* 7*s.* 6*d.*, which sum includes the master's allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

PENZANCE.—(Population in 1851—10,000.)

Established in 1853. It is held in Regent House.

The officers of the committee of management are:—

The Mayor, Chairman.

William H. Rodd, Secretary.

Henry Geoffroi, Head-Master; 1 certificate.

Stephen Thomas and William T. Bennett are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,027, showing a total increase

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The attendance at the classes has been :—Day classes—25 students, who have paid 4*s.* and 5*s.* per month, and an entrance fee of 1*s.*; total, 24*l.* 15*s.* Evening classes—100 students, who have paid 2*s.* per month, and 1*s.* entrance fee. The amount of these fees has been 45*l.* 10*s.* 6*d.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Eleven local medals, 23 second grade rewards, and 54 first grade rewards have been obtained.

The annual inspection and public examination took place in May.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 101*l.* 14*s.* 6*d.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

PRESTON—(Population in 1851—69,000.)

Established in 1860. It is held in the Mechanics' Institution, Avenham Lane.

The officers of the committee of management are :—

The Rev. Canon Parr, Chairman.

William Ascroft, Secretary.

H. Gilbert, Head-Master; 2 certificates.

Frederick W. Roscoe and Frederick P. Langley are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,609. This number includes 1,369 children of public schools, paying 8*l.* 17*s.*; 82 school-teachers and pupil-teachers, paying 18*l.*; and 158 students who have attended the Central School, from whom 87*l.* 14*s.* 1*d.* has been received. The total amount of fees has been 114*l.* 11*s.* 1*d.*

The attendance at the classes has been :—Day classes—73 students, who have paid 2*s.* to 8*s.* per month; total, 58*l.* 12*s.* 6*d.* Evening classes—85 students, who have paid 1*s.* and 1*s.* 6*d.* per month. The amount of these fees has been 29*l.* 1*s.* 7*d.*

The number of prizes awarded is included with the School of Art, Lancaster.

The school has expended from its own funds 25*l.* 14*s.* 8½*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in June.

The amount of aid afforded to the school by the Department has been 86*l.* 0*s.* 11*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, aid in the purchase of examples, &c.

READING.—(Population in 1851—11,495.)

Established in 1860. It is held in West Street.

The officers of the committee of management are :—

Dr. Wells, Chairman.

T. C. Williams, Secretary.

Charles R. Havell, Head-Master.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 405. This number includes 203 children of public schools; 111 students of private schools, paying 185*l.*; 15 school-teachers and pupil-teachers, paying 3*l.* 14*s.* 3*d.*; and 76 students who have attended the Central School, from whom 73*l.* 14*s.* 3*d.* has been received. The total amount of fees has been 262*l.* 8*s.* 6*d.*

The attendance at the classes has been :—Day classes—28 students who have paid 6*s.* and 8*s.* 6*d.* per month; total, 39*l.* 11*s.* Evening classes—48 students, who have paid 1*s.* to 4*s.* per month, and 1*s.* 6*d.* and 2*s.* entrance fee. The amount of these fees has been 34*l.* 3*s.* 3*d.*

The school has expended from its own funds 32*l.* 3*s.* 11*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The school has not yet been examined.

The amount of aid afforded to the school by the Department has been 19*l.* 12*s.* 9*d.* towards the purchase of examples.

SHEFFIELD.—(Population in 1851—165,000.)

Established in 1843. It is held in Arundel Street.

The officers of the committee of management are :—

Stirling Howard, Chairman.

Benjamin Wightman, Secretary.

Young Mitchell, Head-Master.

Lionel Legge (2 certificates), and Henry Dent Lomas, Assistant-Masters.

Edwin Page Turner, Read Turner, and Hugh H. Stannus are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 1,298, showing a total decrease of 195 since last year. This number includes 890 children of public schools; 12 students of private schools; 21 school-teachers and pupil-teachers, paying 5*l.* 12*s.* 6*d.*; and 375 students who have attended the Central School, from whom 262*l.* 12*s.* 6*d.* has been received. The total amount of fees has been 268*l.* 5*s.*, showing a decrease of 138*l.* 17*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—131 students, who have paid 15*s.* per quarter; total, 99*l.* 7*s.* 6*d.* Evening classes—244 students, who have paid 5*s.* per quarter. The amount of these fees has been 163*l.* 5*s.*

Four students have qualified themselves for prize-studentships, and have received certificates.

The school received five Department prizes (10*l.*), with seven national medallions; in addition to which 21 local medals, 53 second grade rewards, and 20 first grade rewards have been obtained. The school had expended from its own funds 3*l.* 11*s.* 8*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in December,

An exhibition of the students' works took place, and was attended by about 700 visitors.

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Appendix E. The amount of aid afforded to the school by the Department has been 586*l.* 9*s.* 3*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

SCHOOLS OF ART.

SOUTHAMPTON and ROMSEY (with Branch at RINGWOOD).—
(Population in 1851—Southampton, 37,385; Romsey, 5,644.)

Established in 1855. It is held in the Victoria Assembly Rooms, Portland Terrace, Portland Street.

The officers of the committee of management are :—

The Mayor, Chairman.

R. Critchlow, Secretary.

William J. Baker, Head-Master ; 1 certificate.

Samuel Stainer and William T. Roberts are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 971, showing a total decrease of 22 since last year. This number includes 585 children of public schools, paying 24*l.* 14*s.*; 120 students of private schools, paying 95*l.* 6*s.*; 62 school-teachers and pupil-teachers, paying 28*l.* 13*s.*; and 204 students who have attended the Central School, from whom 118*l.* 2*s.* 6*d.* has been received. The total amount of fees has been 266*l.* 15*s.* 6*d.*, showing an increase of 57*l.* 9*s.* 8*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—77 students, who have paid 4*s.* and 8*s.* per month ; total, 79*l.* 15*s.* 6*d.* Evening classes—127 students, who have paid 1*s.* 6*d.* to 2*s.* per month. The amount of these fees has been 38*l.* 7*s.*

Three students have qualified themselves for prize-studentships, and have received certificates.

Seven local medals, 28 second grade rewards, and 39 first grade rewards have been obtained. The school has expended from its own funds 1*l.* 10*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in September.

An exhibition of the students' works took place in October, and was attended by about 300 visitors.

The amount of aid afforded to the school by the Department has been 108*l.* 3*s.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

STIRLING.—(Population in 1851—12,837.)

Established in 1857. It is held in High Street.

The officers of the committee of management are :—

John Cristie, Chairman.

Leonard Baker, Secretary and Head-Master ; 1 certificate.

Peter Wright is the pupil-teacher.

The total number of students receiving instruction in drawing in or through the agency of the school during 1860 has been 487, showing a total decrease of 198 since last year. This number includes 400 children of public schools, paying 9*l.*; 7 school-teachers and pupil-teachers, paying 1*l.* 1*s.*; and 80 students who have attended the Central School.

Three local medals, 13 second grade rewards, and 13 first grade rewards have been obtained. Appendix E.
SCHOOLS OF
ART.

The annual inspection and public examination took place in June.

An exhibition of the students' works took place, and was attended by about 600 visitors.

The amount of aid afforded to the school by the Department has been 29*l.* 19*s.* 6*d.*, which sum includes the payments for the master's certificate and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

STOKE-ON-TRENT.—(Population in 1851—10,000.)

Established in 1847. It is held in the Town Hall.

The officers of the committee of management are :—

C. M. Campbell, Chairman.

Oliver Lodge, Secretary,

Silas Rice, Head-Master.

Hugues Protat (1 certificate), and J. P. Bacon (2 certificates), Assistant-Masters.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 321, showing a total decrease of 4 since last year. This number includes 144 children of public schools, paying 40*l.*; 2 school-teachers and pupil-teachers, paying 7*s.* 6*d.*; and 175 students who have attended the Central School, from whom 131*l.* 7*s.* 3*d.* has been received. The total amount of fees has been 171*l.* 14*s.* 9*d.*, showing an increase of 15*l.* 8*s.* 9*d.* over the sum received last year.

The attendance at the classes has been :—Day classes—79 students, who have paid 1*s.* 6*d.* per month, and an entrance fee of 2*s.*; total, 55*l.* 15*s.* 6*d.* Evening classes—96 students, who have paid 2*s.* per month, and 2*s.* entrance fee. The amount of these fees has been 75*l.* 11*s.* 9*d.*

The school received three Department prizes (10*l.*), with three national medallions; in addition to which 16 local medals, 21 second grade rewards, and 1 first grade reward have been obtained. The school has expended from its own funds 4*l.* 17*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in February.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 293*l.* 18*s.* 6*d.*, which sum includes the payments for the masters' certificates and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

STOURBRIDGE.—(Population in 1851—7,847.)

Established in 1851. It is held in Talbot Lane, Market Street.

The officers of the committee of management are :—

J. H. H. Foley, M.P., Chairman.

William H. King, Secretary.

G. P. Yeats, Head-Master; 3 certificates.

John Northwood is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 774, showing a total increase

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The attendance at the classes has been:—Day classes—23 students, who have paid 3*s.* 6*d.* per month; total, 22*l.* 13*s.* 9*d.* Evening classes—111 students, who have paid 2*s.* per month. The amount of these fees has been 77*l.* 2*s.* 6*d.*

Two students have qualified themselves for prize-studentships, and have received certificates.

Seven local medals, 5 second grade rewards, and 16 first grade rewards have been obtained.

The annual inspection and public examination took place in October.

An exhibition of the students' works took place, and was attended by nearly 800 visitors.

The amount of aid afforded to the school by the Department has been 67*l.* 11*s.* 6*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

STROUD.—(Population in 1851—37,386.)

Established in 1860. It is held in High Street.

The officers of the committee of management are:—

J. W. Hallewell, Chairman.

S. S. Dickinson, Secretary.

John Kemp, Head-Master; 3 certificates.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 440. This number includes 350 children of public schools, paying 8*l.* 15*s.*; 12 school-teachers and pupil-teachers, paying 1*l.* 13*s.* 9*d.*; and 78 students who have attended the Central School, from whom 53*l.* 9*s.* has been received. The total amount of fees has been 63*l.* 17*s.* 9*d.*

The attendance at the classes has been:—Day classes—28 students, who have paid 5*s.* to 15*s.* per quarter; total, 42*l.* 19*s.* Evening classes—50 students, who have paid 5*s.* per quarter. The amount of these fees has been 10*l.* 10*s.*

The number successful at the examination is included with that at Gloucester.

The school has expended from its own funds 17*l.* 9*s.* 11*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

TAUNTON.—(Population in 1851—15,000.)

Established in 1856. It is held in Bath Place.

The officers of the committee of management are:—

A. Mills, M.P., Chairman.

Rev. W. A. Jones and J. Blizard, Secretaries.

Archibald Gunn, Head-Master; 3 certificates.

Thos. G. Crump and William Tucker are the pupil-teachers.

The total number receiving instruction in or through the agency of the school in 1860 has been 601, showing a total increase of 51 since last year. This number includes 420 children of public schools, paying 10*l.* 10*s.*; 53 students of private schools, paying 34*l.* 17*s.* 6*d.*; 8

school-teachers and pupil-teachers, paying 1*l.* 3*s.*; and 120 students who have attended the Central School, from whom 157*l.* 11*s.* 6*d.* has been received. The total amount of fees has been 204*l.* 2*s.*, showing a decrease of 33*l.* 6*s.* from the sum received last year. Appendix F
SCHOOLS OF
ART.

The attendance at the classes has been:—Day classes—66 students, who have paid 5*s.* and 7*s.* per month, and an entrance fee of 2*s.* 6*d.* and 5*s.*; total, 126*l.* 8*s.* 6*d.* Evening classes—54 students, who have paid 2*s.* to 4*s.* per month, and 1*s.* to 2*s.* entrance fee. The amount of these fees has been 31*l.* 3*s.*

Two students have qualified themselves for prize-studentships, and have received certificates.

The school received one Department prize (10*l.*), with one national medallion; in addition to which 19 local medals, 9 second grade rewards, and 35 first grade rewards have been obtained. The school has expended from its own funds 3*l.* 15*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in May.

An exhibition of the students' works took place, and was attended by about 1,600 visitors.

The amount of aid afforded to the school by the Department has been 120*l.* 13*s.* 2*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

TRURO.—(Population in 1851—12,000.)

Established in 1853. It is held in River Street.

The officers of the committee of management are:—

Charles Barham, Chairman.

Thomas Solomon, Secretary.

Richard Griffiths, Head-Master; 2 certificates.

George Petherick is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 356, showing a total increase of 92 since last year. This number includes 287 children of public schools, paying 30*l.*; 25 students of private schools, paying 26*l.*; 9 school-teachers and pupil-teachers, paying 1*l.* 1*s.*; and 35 students who have attended the Central School, from whom 11*l.* 5*s.* 6*d.* has been received. The total amount of fees has been 68*l.* 6*s.* 6*d.*, showing an increase of 18*l.* 13*s.* 10*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—6 students, who have paid 5*s.* and 6*s.* per month; total, 8*l.* Evening classes—29 students, who have paid 1*s.* to 3*s.* per month. The amount of these fees has been 3*l.* 5*s.* 6*d.*

Four local medals, 6 second grade rewards, and 10 first grade rewards have been obtained. The school has expended from its own funds 7*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in May.

An exhibition of the students' works took place, and was attended by about 400 visitors.

The amount of aid afforded to the school by the Department has been 38*l.* 10*s.* 9*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

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WARRINGTON.—(Population in 1851—23,363.)

SCHOOLS OF
ART.

Established in 1853. It is held in Bold Street.

The officers of the committee of management are :—

Col. Wilson Patten, M.P., Chairman.

E. Brewtnall, Secretary.

J. C. Thompson, Head-Master; 2 certificates.

Edw. Haydon and George A. Smith are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 890, showing a total decrease of 115 since last year. This number includes 526 children of public schools, paying 15*l.*; 233 students of private schools, paying 19*l.*; 34 school-teachers and pupil-teachers, paying 17*l.* 8*s.*; and 97 students who have attended the Central School, from whom 11*l.* 19*s.* has been received. The total amount of fees has been 335*l.* 7*s.*, showing an increase of 20*l.* 3*s.* over the sum received last year.

The attendance at the classes has been :—Day classes—38 students, who have paid 2*s.* to 5*s.* per month; total, 81*l.* 2*s.* Evening classes—59 students, who have paid 2*s.* per month. The amount of these fees has been 30*l.* 17*s.*

Five students have qualified themselves for prize-studentships, and have received certificates.

The school received two Department prizes (10*l.*), with two national medallions; in addition to which 23 local medals, 15 second grade rewards, and 36 first grade rewards have been obtained. The school has expended from its own funds 15*l.* 10*s.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in November.

An exhibition of the students' works took place, and was attended by 1,060 persons.

The amount of aid afforded to the school by the Department has been 161*l.* 19*s.* 2*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallions, &c.

WATERFORD.—(Population in 1851—25,000.)

Established in 1852. It is held in the Savings' Bank, and has an elementary branch at Portland.

The officers of the committee of management are :—

The Very Rev. the Dean, Chairman.

George Gibson, Secretary.

Samuel McCloy, Head-Master; 1 certificate.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 349, showing a total increase of 43 since last year. This number includes 237 children of public schools, paying 36*l.*; 18 school-teachers and pupil-teachers, paying 25*l.*; and 94 students, who have attended the Central School from whom 48*l.* 11*s.* 9*d.* has been received. The total amount of fees has been 109*l.* 11*s.* 9*d.*, showing a decrease of 30*l.* 16*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—51 students, who have paid 2*s.* and 3*s.* 6*d.* per month; total 33*l.* 0*s.* 6*d.* Evening classes—43 students, who have paid 1*s.* 3*d.* and 2*s.* per month. The amount of these fees has been 15*l.* 11*s.* 3*d.*

Four students have qualified themselves for prize-studentships and have received certificates. Appendix L

Seventeen local medals, 5 second grade rewards, and 12 first grade rewards have been obtained. SCHOOLS OF ART.

The annual inspection and public examination took place in October.

An exhibition of the students' works took place, and was attended by 520 visitors.

The amount of aid afforded to the school by the Department has been 65*l.* 6*s.* 7*d.*, which sum includes the payments for the master's certificate and other allowances, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

WENLOCK.—(Population in 1851, 8,000).—See COALBROOKDALE.

Established in 1858.

The officers of the committee of management are :—

W. P. Brookes, Chairman.

W. G. Norris, Secretary.

J. A. Mulligan, Head-Master ; 2 certificates.

WOLVERHAMPTON.—(Population in 1851—60,000.)

Established in 1853. It is held in Darlington Street.

The officers of the committee of management are :—

Lord Lyttelton, Chairman.

Charles B. Mander, Secretary.

W. J. Mückley, Head-Master ; 4 certificates.

E. R. Taylor, Assistant-Master ; 2 certificates.

Charles Gregory is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 488, showing a total decrease of 1,069 since last year. This number includes 331 children of public schools, paying 13*l.* 15*s.* ; 27 school-teachers and pupil-teachers, paying 3*l.* 15*s.* ; and 130 students who have attended the Central School, from whom 149*l.* 7*s.* has been received. The total amount of fees has been 166*l.* 17*s.*, showing a decrease of 3*l.* 13*s.* 9*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—38 students, who have paid 5*s.* and 7*s.* 6*d.* per quarter, and an entrance fee of 2*s.* 6*d.* ; total, 69*l.* 9*s.* 6*d.* Evening classes—92 students, who have paid 7*s.* 6*d.* per quarter, and 2*s.* 6*d.* entrance fee. The amount of these fees has been 79*l.* 17*s.* 6*d.*

Seventeen local medals, 25 second grade rewards, and 26 first grade rewards have been obtained. The school has expended from its own funds 15*s.* 3*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in January.

An exhibition of the students' works took place, and was attended by a large number of visitors.

The amount of aid afforded to the school by the Department has been 103*l.* 10*s.* 9*d.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teacher ; also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

Appendix E.
SCHOOLS OF
ART,

WORCESTER.—(Population in 1851—27,328.)

Established in 1851. It is held in Pierpoint Street.

The officers of the committee of management are:—

The Earl Dudley, Chairman,

John S. Pakington and R. W. Binns, Secretaries.

James Kyd, Head-Master.

William P. Bowen, Assistant-Master; 2 certificates.

W. S. Sparks and Josiah Rushton are the pupil-teachers.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 894, showing a total decrease of 59 since last year. This number includes 598 children of public schools, paying 35*l.*; 33 school-teachers and pupil-teachers, paying 5*l.* 15*s.*; and 263 students who have attended the Central School, from whom 76*l.* 19*s.* 9*d.* has been received. The total amount of fees has been 117*l.* 14*s.* 9*d.*, showing an increase of 2*l.* 9*s.* 3*d.* over the sum received last year.

The attendance at the classes has been:—Day classes—44 students, who have paid 1*s.* to 4*s.* per month; total, 25*l.* 15*s.* 9*d.* Evening classes—219 students, who have paid 8*d.* to 2*s.* per month. The amount of these fees has been 51*l.* 4*s.*

The school received one Department prize (10*l.*), with one national medalion; in addition to which 20 local medals, 8 second grade rewards, and 12 first grade rewards have been obtained. The school has expended from its own funds 14*l.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c.

The annual inspection and public examination took place in October.

Two exhibitions of the students' works took place, and were attended by 1,384 visitors.

The amount of aid afforded to the school by the Department has been 229*l.* 15*s.*, which sum includes the payments for the masters' certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

YARMOUTH (GREAT).—(Population in 1851—30,900.)

Established in 1857. It is held on the South Quay.

The officers of the committee of management are:—

The Mayor, Chairman.

Captain E. S. Jervoise and Rev. F. T. Burlton, Secretaries.

Thomas W. Chevalier, Head-Master; 3 certificates.

Thomas W. Wright and John Emms are the pupil-teachers.

The total number receiving instruction in or through the agency of the school during 1860 has been 1,014, showing a total increase of 52 since last year. This number includes 890 children from public schools, paying 17*l.* 10*s.*; 15 school-teachers and pupil-teachers, paying 2*l.* 10*s.*; and 109 students who have attended the Central School, from whom 87*l.* 5*s.* 6*d.* has been received. The total amount of fees has been 107*l.* 5*s.* 6*d.*, showing a decrease of 52*l.* 9*s.* 9*d.* from the sum received last year.

The attendance at the classes has been:—Day classes—50 students, who have paid 2*s.* 6*d.* to 8*s.* per quarter, and an entrance fee of 2*s.* 6*d.* to 4*s.*; total, 55*l.* 16*s.* Evening classes—59 students, who have paid 1*s.* and 2*s.* per quarter, and 1*s.* entrance fee. The amount of these fees has been 31*l.* 9*s.* 6*d.*

One student has qualified himself for a prize-studentship and has received a certificate.

Eleven local medals, 32 second grade rewards, and 56 first grade rewards have been obtained. The school has expended from its own funds 1*l.* 18*s.* 6*d.* on account of examples, besides the local expenses for rent, cleaning, firing, lighting, printing, &c. Appendix E.
SCHOOLS OF
ART.

The annual inspection and public examination took place in March.

The amount of aid afforded to the school by the Department has been 131*l.* 1*s.* 10*d.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teachers, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, &c.

YORK.—(Population in 1851—42,000.)

Established in 1842. It is held in Minster Yard.

The officers of the committee of management are :—

Rev. Isaac Spencer, Chairman.

Edward Taylor, Secretary.

John Charles Swallow, Head-Master; 4 certificates.

William Bevan is the pupil-teacher.

The total number receiving instruction in drawing in or through the agency of the school during 1860 has been 848, showing a total increase of 41 since last year. This number includes 612 children of public schools, paying 10*l.*; 70 school-teachers and pupil-teachers, paying 16*l.* and 166 students who have attended the Central School, from whom 90*l.* 11*s.* has been received. The total amount of fees has been 116*l.* 11*s.*, showing a decrease of 25*l.* 3*s.* 6*d.* from the sum received last year.

The attendance at the classes has been :—Day classes—80 students, who have paid 3*s.* 6*d.* to 5*s.* per month, and an entrance fee of 2*s.* 6*d.* and 4*s.*; total, 51*l.* 10*s.* Evening classes—86 students, who have paid 8*s.* to 12*s.* per session, and 2*s.* entrance fee. The amount of these fees has been 39*l.* 1*s.*

Three students have qualified themselves for prize-studentships, and have received certificates.

The school received one Department prize (10*l.*), with one national medallion; in addition to which, 9 local medals, 29 second grade rewards, and 37 first grade rewards have been obtained.

The annual inspection and public examination took place in February.

Two exhibitions of the students' works took place, and were attended by about 1,000 visitors.

The amount of aid afforded to the school by the Department has been 135*l.* 18*s.*, which sum includes the payments for the master's certificates and other allowances, the payments to Art pupil-teacher, also the grants on account of the children who obtained rewards, aid in the purchase of examples, the cost of medals, medallion, &c.

H. A. BOWLER.

APPENDIX F.

Appendix F. RESULT of the EXAMINATION of the DIOCESAN and other TRAINING COLLEGES for CERTIFICATES in DRAWING, in November 1860.

EXAMINATION OF
TRAINING
COLLEGES.

SCHOOLS FOR MASTERS ONLY.

Name of School.	Students.		Teachers.		Certificates granted.	Proportion of Success.
	No. Examined.	No. Successful.	No. Examined.	No. Successful.		
Bangor (British and Foreign School Society's)	18	17	1	—	—	'80
Battersea (National Society's)	103	80	1	1	7	'77
Carmarthen (National Society's)	37	30	2	2	—	'82
Carnarvon (Ch. of Eng.)	33	33	1	1	1	'87
Chelsea, St. Mark's (Nat. Soc.)	105	90	—	—	8	'85
Chester (Diocesan)	57	53	2	2	0	'98
Chichester (Diocesan)	29	24	—	—	2	'82
Culham (Oxford Diocesan)	81	64	2	2	4	'79
Durham (Diocesan)	49	43	2	2	5	'84
Edinburgh (Scottish Episcopal)	17	10	2	0	—	'52
Exeter (Diocesan)	44	36	2	1	4	'80
Hammersmith, St. Mary's (R. C.)	Not examined.		—	—	—	—
Metropolitan (Ch. of Eng.)	81	57	2	1	5	'69
Peterborough (Ch. of Eng.)	39	31	3	2	1	'78
Saltley, near Birmingham (Worcester Diocesan)	90	69	2	—	0	'75
Winchester (Diocesan)	21	17	—	—	—	'80
York and Ripon (Diocesan)	68	44	4	3	3	'65

FOR MISTRESSES ONLY.

Bishop's Stortford	Not examined.		—	—	—	—
Brighton (Chichester Diocesan)	42	6	—	—	—	'14
Bristol (Diocesan)	83	21	1	—	—	'25
Derby (Lichfield Diocesan)	41	17	1	1	—	'42
Durham (Diocesan)	44	19	2	1	—	'43
Gray's Inn Road (Home and Colonial Society)	132	46	7	4	2	'35
Liverpool (Roman Catholic, 96, Mount Pleasant)	62	29	3	1	—	'44
Norwich (Diocesan)	42	6	—	—	—	'14
St. Leonard's-on-Sea (R. Cath.)	32	29	—	—	2	'90
Salisbury (Diocesan)	63	22	1	1	2	'35
Truro (Exeter Diocesan)	23	3	1	1	—	'16
Warrington (Chester Diocesan)	95	23	—	—	—	'29
Whitlands (National Society's)	108	61	—	—	1	'56
York and Ripon (Diocesan)	32	10	—	—	—	'31

FOR BOTH MASTERS AND MISTRESSES.

Borough Road (British and Foreign School Society's)	115	78	6	6	5	'69
Cheltenham (Ch. of Eng.)	156	85	1	1	3	'54
Edinburgh (Established Church)	153	82	3	3	1	'54
Edinburgh (Free Church)	173	97	—	—	3	'56
Glasgow (Established Church)	117	65	4	2	—	'55
Glasgow (Free Church)	154	76	4	1	1	'48
Westminster (Wesleyan)	111	77	4	3	9	'69
Totals	2,655	1,558	66	42	79	'58
Totals for 1859	2,557	1,141	226	60	58	'43
Ditto for 1858	2,213	954	317	104	82	'41
Ditto for 1857	1,784	562	324	61	28	'29

H. A. BOWLER.

APPENDIX F 1

TABLE showing the NUMBER of PERSONS receiving INSTRUCTION in DRAWING through the Agency of the SCHOOLS OF ART in 1860, compared with that of previous Years.

NUMBER OF
PERSONS
TAUGHT
DRAWING.

	1855.	1856.	1857.	1858.	1859.	1860.
Public and other Schools . . .	18,988	22,746	30,802	65,465	67,490	74,267
Provincial Schools of Art . . .	8,274	10,204	10,238	10,784	13,787	21,121
Metropolitan District Schools (including St. Martin's, Long Acre, Fomale School, 43, Queen Square, and Lambeth, Prince's Road) . . .	610	602	778	1,147	1,309	1,530
Students in Training for Masters at South Kensington . . .	79	106	71	62	64	68
Schoolmasters and Pupil-teachers in the Provinces . . .	1,547	1,425	1,323	2,012	2,322	2,495
Totals . . .	29,498	35,083	43,212	79,470	84,972	99,481

H. A. BOWLER.

App. F2.
SCHOOLS OF
ART.

APPENDIX F 2.

LIST of SCHOOLS of ART throughout the United Kingdom in connexion
COUNCIL ON

Name of Place.	Established.	Population in 1851.	Chairman.	Secretary.
Aberdeen	1853	71,973	The Lord Provost .	Sinclair, James .
Andover	1854	17,266	The Mayor . . .	Fox, John R. . .
Arbroath	1860	17,008	Dickson, J. Anderson; the Provost.	Legge, John Wilson .
Bath	1854	51,240	Tinling, Rev. E. D. .	Davis, C. E., F.S.A. .
Basingstoke	See Andover			
Belfast	1850	99,660		
Birkenhead	1855	24,285	Balleny, W. . . .	Sloman, W. H. . .
Birmingham, with Branches at Smethwick, Spon Lane, and West Bromwich.	1842	234,841	Scott, Sir Francis E., Bart.	Laundy, Edwin . .
Bolton	1857	61,171	Powell, Rev. H. . .	Turner, Rev. C. E. .
Boston	1800	15,132	Blenkin, Rev. G. B. .	Gane, W.; Wheeler, W. H.
Bridgenorth	1858	6,171	Ward, Rev. Horatio J.	Evans, Rev. D. D. .
Bridgewater	1860	10,960	Brown, John . . .	Bailey, S. A. . . .
Brighton	1859	65,569	Griffith, Rev. John .	Merrifield, F.; Ever- shed, Samuel.
Bristol	1853	173,323	Miles, P. W. S. . .	Hayworth, Rev. J.; Harford, J. B.
Bromsgrove	1859	24,822		Gibson, W. G. . . .
Burnley	1868	33,000	Shuttleworth, Sir J. Kay, Bart.	Sutherland, John . .
Burslem	1853	19,725	Pinder, Thomas . .	Mayer, Joseph . . .
Cambridge	1858	27,000	Emery, Rev. W. . .	Beaumont, Rev. W. J. .
Carlisle	1854	30,000	The Mayor	McAlpine, D. . . .
Carmarthen and Swansea .	1854	10,524	Morris, W.	Thomas, John . . .
Carnarvon, with Branches at Bangor and Portmadoc.	1853	8,674	Vincent, Rev. J. C. .	Manley, H. P. . . .
Cheltenham	1853	35,000	Bellairs, Rev. H. W. .	Beamish, R., F.R.S. .
Chester	1833	27,766	Wardell, W. . . .	Rigg, Rev. Arthur . .
Cirencester	1800	6,096	Masters, T. C. . . .	Zachary, H.
Clonmel	1854	15,662	Hackett, J. P., Alder- man.	Purcell, P. J. . . .
Coalbrookdale	1856	15,662	Dickinson, Henry . .	Norris, W. Gregory .
Cork	1850	86,485	The Mayor	Dunscombe, T. S. . .
Coventry	1844	36,812	Lord Leigh	Caldicott, Richard, jun.
Darlington	1857	11,228	Pease, Henry, M.P. .	Pritchett, J. P. . . .
Devonport	1859	21,147	Wilson, N.	King, U. H., and Rad- ford, J. C.
Dublin	1849	250,000	Bagot, Charles E. . .	Steele, Dr. E. . . .
Dudley	1853	37,962	Browne, Rev. J. C. .	Smith, E. F.
Dundee	1856	78,931	Sturrock, John . . .	Milne, George . . .
Durham	1853	23,188	Bramwell, J. . . .	Greenwell, Rev. W. .

APPENDIX F 2.

App. F
SCHOOLS OF
ART.

with the SCIENCE AND ART DEPARTMENT of the COMMITTEE OF
EDUCATION.

Masters and the Number of Certificates they have obtained.	No. of Art Pupil- Teach- ers, 1860.	No. taught in Public and other Schools, 1860.	No. taught in Central Schools, 1860.	Total No. under Instruc- tion, 1860.	No. of Suc- cessful Students, 1860.	Local Medals awarded, 1860.	National Medal- lions awarded, 1860.
Cleland, Peter, 1	4	1,230	274	1,504	41	12	2
Ryles, George, 1, 6a	—	215	60	275	33	14	—
Legge, John Wilson	—	394	103	497	Not examined.		
Hill, J., 1, 6a, 6b	2	1,182	100	1,282	62	14	1
Hale, Robert, 1, 6a	—	No return.			40	—	—
Bentley, J., 1, 4, 6a, 6b.	—	No return.			11	9	—
Rainbach, David W.; Waltis, W.; Soumes, W. H., 1, 4, 5, 6a; Bli- zard, Edw., 1, 6a, 6b.	3	1,156	874	2,030	186	24	1
Walker, J. W., 1, 2, 6a	—	1,030	140	1,170	69	15	1
Howard, Vernon, 1, 2, 6a	—	Not examined.					
Mulligan, James A., 1, 6a	—	—	60	60	See Coalbrookdale.		
Davis, James A., 1, 6a	—	240	104	344	Not examined.		
White, John, 1, 6a	1	1,234	225	1,459	78	13	—
Ferrier, R. E., 1; Cosbie, W. S., 1, 2, 3, 6a	2	2,343	350	2,693	152	14	—
Kyd, James; Bowen, W. P., 1, 2.	—	—	—	—	See Worcester.		
Carter, James, 1, 2, 6a	1	719	179	898	43	6	—
(In abeyance.)	Not examined.						
Harley, R., 1, 2, 3.	1	761	159	920	33	5	1
Lees, H., 1, 2, 6a	1	510	117	627	40	14	1
Hosford, F. F., 1, 2	2	1,090	59	1,158	43	2	—
Rowland, J. C., 1	2	1,232	93	1,325	41	6	—
Knight, James P., 1	1	1,324	205	1,529	101	19	—
Davidson, Ellis A., 1	2	2,504	176	2,680	218	9	—
Miller, James, 1, 6a, 6b	—	490	50	540	Not examined.		
Fraser, Edward A., 1, 6b	—	124	62	186	31	8	—
Mulligan, James A., 1, 6a	1	491	113	604	48	6	—
Brenan, James, 1, 2, 3, 6a	2	130	234	364	30	20	2
Rafter, Henry, 1, 2; Hough, William.	1	836	128	964	31	16	2
Elton, Samuel, 1, 6a	2	931	182	1,113	78	17	3
Wardle, George, 1, 6a, 6b	1	640	148	788	75	7	—
MacManus, Henry; Healy, James, 1	1	400	423	823	71	25	2
Sturtevant, C. T., 1, 2, 6a	2	1,011	61	1,072	16	4	—
Kennedy, John, 1, 2, 6a	5	1,956	406	2,362	274	17	—
Newton, G., 1, 2, 3	—	439	109	548	35	11	—

App. F 2.

List of Schools of Art—continued.

SCHOOLS OF
ART.

Name of Place.	Established.	Population in 1851.	Chairman.	Secretary.
Edinburgh . . .	1858	160,000	The Board of Manu- factures.	Primrose, Hon. B. F..
Exeter . . .	1854	40,000	Northcote, Sir S. H., Bart., C.B.	Miles, W., and West- comb, C. . .
Glasgow . . .	1845	400,000	Alison, Sir A., Bart. .	Campbell, James A. .
Gloucester . . .	1859	26,308	Parry, T. Gambier .	Crawley, Rev. C. Y. .
Greenock . . .	1857	40,000	Hunter, T. O. .	Mackenzie, Alex. .
Guildford . . .	1858	17,636	Bovill, W., M.P. .	Matthews, Rev. R. B.
Hanley . . .	1847	35,000	Wedgwood, Francis .	Powell, Edwin .
Halifax . . .	1859	40,000	Dennison, James .	Child, Lewis H. .
Hereford . . .	1853	12,108	The Very Rev.the Dean	Fowler, J. T. O. .
Huddersfield . . .	1850	30,880	See Leeds.	
Ipswich . . .	1859	33,000	Gaye, Rev. C. H., M.A.	Bacon, S. C. É. .
Lancaster . . .	1856	84,660	The Mayor . .	Whelon, W. .
Leeds, with Branch at Hud- dersfield.	1846	172,270	O'Callaghan, P. .	Pickering, John .
Limerick . . .	1852	55,268	Griffin, Daniel, M.D..	Lysaght, William .
Liverpool, North . . .	1855	375,955	Howson, Rev. J. S. .	Jones, J. Gregory .
„ South . . .			Heyworth, Peter G. .	Cariss, Astrup .
Llanelly . . .	1854	23,507	Nevill, C. W. .	Bevan, S., Buckley, J.
Macclesfield . . .	1851	39,048	The Mayor . .	Jeffery, William .
Manchester . . .	1842	316,213	Phillips, Robt. N. .	Aspden, Richard .
Metropolitan Schools:—	1842			
Female School, 43, Queen's Square, Bloomsbury.			Thorold, Rev. An- thony W.	Gann, Miss Louisa .
Lambeth . . .	1854		Gregory, Rev. Robert	Messrs. Linton and Sparkes.
St. Martin's . . .	1854		Humphry, Rev. W. G.	Maul, Rev. R. G. .
In Connexion with Cen- tral Training School:—	2,362,236			
Finsbury . . .			Williams, W. .	Houle, J. .
Hampstead . . .			Ainger, Rev. T. .	Wigram, Rev. W. .
Rotherhithe . . .			Blick, Rev. E. .	Blick, Rev. E. .
St. George's-in-the-East .			MacGill, Rev. G. H. .	Lloyd, Alfred .
St. Thomas', Charterhouse			Rogers, Rev. W. .	Rogers, Rev. W. .
South Kensington . .			• • •	Science and Art Depart.
Spitalfields . . .			Casey, John . .	• • •

List of Schools of Art—continued.

App. F 2.

SCHOOLS OF ART.

Masters and the Number of Certificates they have obtained.	No. of Art Pupils—Teachers, 1860.	No. taught in Public and other Schools, 1860.	No. taught in Central Schools, 1860.	Total No. under Instruction, 1860.	No. of Successful Students, 1860.	Local Medals awarded, 1860.	National Medals awarded 1860.
Lauder, R. S.; Ballantyne, John; Dallas, E. W.; Morley, W. A., 1, 4, 5, 6 a; Ashworth, Miss Susan A., 1, 2; Wigzell, Montague, 1.	3	1,535	479	2,014		18	—
Wilson, Charles H.; Greenlees, Robert; Lyne, E., 1, 2, 6 a; Howden, J.; Thomson, David; Patrick, Miss.	3	1,080	312	1,392	157	13	2
Kemp, John, 1, 2, 6 a	—	70	113	183	37	2	—
Urie, Daniel, 1, 6 a	1	500	104	613	15	12	1
Pyne, Charles C., 1	—	450	85	535	35	2	—
Hodder, Charles D., 1, 2; Protat, H., 6 a.	2	554	164	718	35	21	7
Stevenson, Andrew, 1, 6 a	1	237	179	416	30	5	—
Bustin, R. B., 1	—	353	35	303	31	1	—
Griffiths, W. T., 1, 6 a, 6 b	2	829	241	1,070	40	8	—
Gilbert, Herbert, 1, 6 a	1	778	180	958	57	8	—
Ryan, Chas., 1, 2; Smith, Walter, 1, 4, 5.	2	2,996	451	3,447	193	20	—
Brophy, Nicholas, 1, 6 a, 6 b.	1	520	84	404	20	11	—
Bishop, William James; Burkinshaw, S., 1, 2, 6 a.	1	1,504	249	1,753	128	6	—
Finnie, John, 1, 2, 6 a; Pugh, Ephraim.	2	1,618	307	1,925	70	13	1
Hosford, F. F., 1, 2	1	795	27	822	20	—	—
Stewart, George.	3	1,050	138	1,188	52	10	3
Hammersten, James A.; Evans, John; Routledge, Robert, 1, 6 a; Rowe, John, 1, 6 a.	5	5,602	462	6,064	292	30	3
Miss Gann, 1; Williamson, J. B., 1, 2; Miss K. Wilson, 1; Miss Laura de la Belinaye, 1; Miss Helena Wilson, 1, 2.	1	—	156	156	28	26	2
Sparkes, John, 1, 2, 6 a, 6 b	1	570	263	833	54	12	—
Casey, W. L., 1, 2, 3; Burchett, E. S., 1, 6 a, 6 b.	1	1,073	351	1,424	216	22	1
Pearl, S. E., 1, 4, 5, 6, and Masters in Training.			142		32	16	2
Masters in Training			28		2	—	—
" " "			20		19	3	1
" " "		9,801	26	10,566	24	—	—
" " "			70		28	6	1
Burchett, R., and others			370		168	43	8
Brown, W., and Masters in Training.			99		62	8	2

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App. F 2.

List of Schools of Art—*continued.*

SCHOOLS OF
ART.

Name of Place.	Established.	Population in 1851.	Chairman.	Secretary.
Newcastle-under-Lyme	1853	10,560	Broad, Rev. John S. .	Jennings, James .
Newcastle-upon-Tyne	1844	87,784	Watson, Joseph . . .	Leathart, James .
Norwich	1846	70,000	The Mayor	Keith, F. T. . . .
Nottingham	1843	85,000	Heymann, Lewis . . .	Richards, William .
Paisley	1848	48,000	Murray, David	Hodge, William . .
Penzance	1853	10,000	The Mayor	Rodd, Wm. H. . . .
Preston	1860	69,000	The Rev. Canon Parr .	Ascroft, William .
Reading	1860	11,495	Wells, Dr.	Williams, T. C. . .
Sheffield	1843	165,000	Howard, Stirling . . .	Wightman, Benjamin
Southampton, Romsey, and Ringwood.	1855	43,029	The Mayor	Critchlow, Robert .
Stirling	1857	12,837	Cristle, John	Baker, Leonard . .
Stoke-upon-Trent	1847	10,000	Campbell, C.M. . . .	Lodge, Oliver . . .
Stourbridge	1851	7,847	Foley, J. H. H., M.P. .	King, W. H.
Stroud	1860	37,386	Halliwell, J. W. . . .	Dickinson, S. S. . .
Taunton	1856	15,000	Mills, A., M.P.	Jones, Rev. W. A.; Blizard, J.
Truro	1853	12,000	Barham, Charles . . .	Soloman, Thomas .
Warrington	1853	23,363	Patten, Col. W., M.P.	Brewtnall, Edward .
Waterford	1852	25,000	The Very Rev. the Dean	Gibson, George . .
Wenlock	1858	8,000	Brooks, W. P.	Norris, W. G. . . .
Wolverhampton	1853	60,000	Lyttelton, The Lord .	Mander, Charles B. .
Worcester	1851	27,328	Dudley, The Earl . . .	Pakington, J. S.; Binns, R. W. . . .
Yarmouth, Great	1857	30,900	The Mayor	Jervois, Captain; E. S., Burlton, Rev. F. J.,
York	1842	42,000	Spencer, Rev. Isaac .	Taylor, Edward. . .

Schools of Art.

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List of Schools of Art—continued.

App. F 2.
SCHOOLS OF
ART.

Masters, and the Number of Certificates they have obtained.	No. of Art Pupils—Teach-ers, 1860.	No. taught in Public and other Schools, 1860.	No. taught in Central Schools, 1860.	Total No. under Instruc-tion, 1860.	No. of Suc-cessful Students, 1860.	Local Medals awarded, 1860.	National Medal-lions awarded, 1860.
Bacon, J. P., 1, 6 a .	1	330	100	430	33	8	—
Scott, Wm. B.; Lord, John, 1, 6 a.	3	1,020	374	1,400	73	14	2
Cochrane, Robt., 1, 2, 6 a	3	1,088	232	1,320	73	4	—
Fussell, Frederick R. 1; Fussell, Joseph.	2	1,765	206	1,971	172	12	1
Stewart William .	3	620	122	742	33	12	5
Geoffroi, Henry, 1 .	2	869	158	1,027	106	11	—
Gilbert H., 1, 6 a .	2	1,369	240	1,609	See Lancaster.		
Havell, Charles R., 1 .	—	314	91	405	Not examined.		
Mitchell, Young; Legge, L., 1, 4; Lomas, H. D.	3	902	390	1,298	110	21	7
Baker, Wm. John, 1 .	2	705	206	971	97	7	—
Baker, Leonard, 1 .	1	400	87	487	26	3	—
Rice, Silas; Protat, Hugues, 6 a; Bacon, J. P., 1, 6 a.	—	144	177	321	22	16	3
Yeats, G. P., 1, 2, 3 .	1	637	137	774	33	7	—
Kemp, John, 1, 2, 6 a .	—	350	90	440	See Gloucester.		
Gunn, A., 1, 6 a, 6 b .	2	473	128	601	58	19	1
Griffiths, Richard, 1, 6 a	1	412	44	456	26	4	—
Thompson, J. C., 1, 2 .	2	759	131	890	77	23	2
McCloy, Samuel, 1 .	—	237	112	349	30	17	—
Mulligan, J. A., 1, 6 a .	See Coalbrookdale.						
Mackley, W. J., 1, 2, 3, 6 a; Taylor, E. R., 1, 6 a	1	331	157	488	51	17	—
Kyd, James; Bowen, W. P., 1, 2.	2	598	296	894	31	20	1
Chevalier, Thomas W., 1, 6 a, 6 b.	2	890	124	1,014	88	11	—
Swallow, J. C., 1, 2, 4, 6 a	1	612	236	848	66	9	1
Totals . . .	103	74,267	15,146	89,413*	5,137	879	76

* This total does not include the 68 students in training for masters at the Central School, South Kensington. See Appendix F 1, p. 93.

H. A. BOWLER.

APPENDIX F 3.

App. F 3. TABLE showing the AMOUNT of FEES paid during the Year ending the 31st December 1860, by the various Classes of Persons under Instruction in Drawing at the Metropolitan and Provincial Schools of Art.

School.	FEES PAID.					
	By Public Schools.	By Private Schools.	By Teachers and Pupil-teachers.	Schools of Art.		Totals.
				By Morning Students.	By Evening Students.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Aberdeen . . .	65 0 0	120 0 0	6 9 1½	10 15 0	76 12 5	278 10 6½
Andover . . .	10 0 0	20 0 0	5 0 0	49 10 0	25 4 6	102 14 6
Arbroath . . .	. . .	20 0 0	5 10 0	22 0 0	19 0 0	66 10 0
Bath . . .	25 0 0	34 0 0	1 15 0	58 10 3	48 11 3	167 16 6
Basingstoke . . .	<i>See Andover.</i>					
Belfast . . .	<i>In abeyance.</i>					
Birkenhead . . .	<i>No return.</i>					
Birmingham . . .	120 0 0	. . .	14 17 0	200 4 6	306 9 0	731 10 6
Bolton . . .	15 0 0	. . .	19 1 0	44 12 6	56 8 0	135 1 6
Bridgnorth . . .	. . .	. . .	1 0 0	85 1 9	7 13 6	93 15 3
Bridgwater . . .	25 0 0	15 0 0	4 7 0	52 4 3	69 3 2	165 14 5
Brighton . . .	30 0 0	79 0 0	6 17 6	123 11 0	70 4 6	309 13 0
Bristol . . .	40 0 0	81 0 0	5 10 6	209 14 0	50 9 6	386 14 0
Bromsgrove . . .	<i>See Worcester.</i>					
Burnley . . .	19 19 6	. . .	14 2 6	49 8 6	21 3 0	104 13 6
Burslem . . .	<i>In abeyance.</i>					
Cambridge . . .	32 10 0	18 15 0	4 12 0	128 8 6	33 4 6	217 10 0
Carlisle . . .	10 0 0	40 0 0	5 19 0	9 0 0	36 18 0	101 17 0
Cardmarthen and Swansea . . .	20 0 0	96 5 0	1 9 2	15 7 0	9 9 10½	142 11 0½
Carnarvon . . .	75 0 0	19 5 0	1 15 0	25 5 0	36 19 0	153 4 0
Cheltenham . . .	. . .	18 0 0	3 0 0	60 6 0	40 0 0	121 6 0
Chester . . .	107 10 0	32 10 0	. . .	28 15 0	40 4 6	208 19 6
Cirencester . . .	25 0 0	45 0 0	5 17 6	32 19 9	25 3 5	134 0 8
Clonmel . . .	50 0 0	. . .	. . .	19 0 6	18 1 3	87 1 9
Coalbrookdale . . .	25 0 0	. . .	. . .	35 14 6	27 8 6	88 3 0
Cork . . .	10 0 0	. . .	0 10 0	93 4 0	59 16 0	163 10 0
Coventry . . .	69 16 3	. . .	3 5 0	25 17 0	34 11 9	133 10 0
Darlington . . .	27 0 0	70 0 0	3 7 6	33 19 0	68 13 9	203 0 3
Devonport . . .	20 10 6	56 12 0	6 0 0	59 6 6	38 2 8	180 12 2
Dublin . . .	13 10 0	. . .	. . .	260 3 7	37 15 0	317 8 7
Dudley . . .	25 0 0	40 0 0	1 10 6	11 11 6	18 10 6	90 12 6
Dundee . . .	35 6 0	. . .	11 0 0	148 19 10	73 19 4	260 5 2
Durham . . .	5 0 0	25 0 0	3 9 0	75 4 0	40 7 6	149 0 6
Edinburgh . . .	127 10 0	. . .	30 12 6	291 1 8	149 17 6	599 1 8
Exeter . . .	40 0 0	. . .	7 3 9	136 8 0	70 0 3	253 12 0
Glasgow . . .	105 5 0	. . .	25 19 0	230 8 8	232 14 6	594 7 0
Gloucester . . .	5 0 0	. . .	4 17 6	62 4 6	23 11 0	85 13 0
Greenock . . .	154 10 0	. . .	1 2 0	. . .	29 8 6	185 0 6
Guildford . . .	10 0 0	. . .	3 0 0	. . .	4 10 6	17 10 6
Hanley . . .	5 0 0	24 0 0	. . .	44 12 6	66 19 9	140 12 3
Halifax . . .	12 10 0	35 0 0	20 15 0	10 0 6	46 16 0	125 1 6
Hereford . . .	70 0 0	30 0 0	1 0 0	. . .	7 0 0	108 0 0
Huddersfield . . .	<i>See Leeds.</i>					
Ipswich . . .	28 15 6	50 0 0	8 5 0	101 19 10	78 1 0	267 1 4
Lancaster . . .	13 17 0	. . .	10 5 0	115 1 0	58 4 0	197 7 0
Leeds . . .	57 5 0	217 10 0	47 16 0	82 10 7	31 16 3	386 17 10
Limerick . . .	49 0 0	. . .	. . .	64 13 3	24 0 0	137 13 3

Table of Fees, 1860.

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TABLE showing the Amount of Fees paid during the Year, &c.—
cont.

TABLE C
FEES.

School.	FEES PAID.														
	By Public Schools.			By Private Schools.			By Pupil-Teachers.			Schools of Art.				Totals.	
										By Morning Students.		By Evening Students.			
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Liverpool:—															
North, Shaw St.	390	0	0	56	0	0	52	13	3	30	7	3	439	0	6
South, Mount St.	190	0	0				6	7	6	77	9	0	101	1	8
Llanely . . .	30	0	0	30	0	0	0	11	0				11	6	9
Macclesfield . . .	32	10	0	59	10	0	2	1	0	13	8	9	23	17	10½
Manchester . . .	200	0	0	392	0	0	83	8	0	173	10	0	220	15	9
Metropolis . . .	463	7	6	25	0	0	30	5	0	1,386	3	0	701	16	0
43, Queen Square							1	10	0	249	4	6	20	0	0
St. Martin's . . .	47	10	0										216	16	0
Lambeth . . .	20	0	0				6	0	0				99	13	0
Newcastle-under-Lyme.	10	0	0				3	17	3	10	0	0	28	4	0
Newcastle-upon-Tyne.	80	12	0	15	0	0	5	3	8	44	3	0	110	10	0
Norwich . . .	29	0	0				5	10	0	40	19	6	71	6	6
Nottingham . . .	40	0	0				1	19	6	34	0	0	77	19	0
Paisley . . .	11	5	0				3	16	0	11	19	0	41	1	0
Penzance . . .	53	0	0	80	0	0				24	15	0	45	10	6
Preston . . .	8	17	0				18	0	0	53	12	6	29	1	7
Reading . . .				185	0	0	3	14	3	30	11	0	34	3	3
Sheffield . . .							5	12	6	99	7	6	163	5	0
Southampton, Romsey, and Ringwood.	24	14	0	95	0	0	23	13	0	79	15	6	38	7	0
Stirling . . .	9	0	0				1	1	0						
Stoke-on-Trent . . .	40	0	0				0	7	6	55	15	6	75	11	9
Stourbridge . . .	60	0	0	15	0	0	0	18	0	22	13	9	77	2	6
Stroud . . .	8	15	0				1	13	9	42	19	0	10	10	0
Taunton . . .	10	10	0	34	17	6	1	3	0	126	8	6	31	3	0
Truro . . .	30	0	0	26	0	0	1	1	0	8	0	0	3	5	6
Warrington . . .	15	0	0	101	0	0	17	8	0	81	2	0	30	17	0
Waterford . . .	36	0	0				25	0	0	33	0	6	15	11	3
Wenlock . . .	See Coalbrookdale.														
Wolverhampton . . .	13	15	0				3	15	0	60	9	6	79	17	6
Worcester . . .	35	0	0				5	15	0	25	15	9	51	4	0
Yarmouth, Great	17	10	0				2	10	0	55	16	0	31	9	6
York . . .	10	9	0				16	0	0	51	10	0	39	1	0
Grand Totals for 1860 . . .	3,406	0	3	2,391	11	0	632	14	23	6,067	2	6	4,723	18	9
Grand Totals for 1859 . . .	3,285	1	3	1,626	10	5½	730	14	8	5,555	15	7	4,168	2	6½
Grand Totals for 1858 . . .	3,205	4	1	1,007	6	0	496	3	9½	4,996	1	10	3,615	8	9

Public schools are National and other schools for the poor, for the most part assisted by Parliamentary grants; they pay 5*l.* a year for one lesson a week.

Private schools are private enterprise schools, not assisted by Parliamentary grants.

Morning students are those who are not prevented by their occupations from attending in the daytime, and are chiefly female students paying high fees.

Evening students are almost wholly artisans, who pay not more than 6*d.* a week for three lessons.

H. A. BOWLER.

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APPENDIX G.

Appendix G. REPORT of the EXAMINERS on the WORKS sent from the various
SCHOOLS of ART in COMPETITION for NATIONAL MEDAL-
LIONS.—May 1860.

REPORT OF
EXAMINERS
ON COMPE-
TITION FOR
NATIONAL
MEDAL-
LIONS.

At the request of the Right Honourable the Lords of the Committee of Council on Education we have examined the works sent up from the several Schools in connexion with the Science and Art Department, for the purpose of awarding medallions to those specimens which appeared to us most meritorious. The list of successful candidates is appended to our Report.

The number of works submitted for our inspection this year is 474, being an advance on the number of last year. With the exception of "drawing and painting from the living nude model," all stages are represented, some, however, more adequately than others.

The competition in the early stages of the course of instruction laid down by the Department is naturally arduous. And, as it is in these stages that the peculiar training adopted is most obvious, it is satisfactory to find in them a large amount of excellence, which has called on our part for a full award of medallions. This is peculiarly the case in stage 10, "flowers and foliage drawn from nature." The works in this stage evidence great observation and study of nature, and much perseverance and well-directed labour in embodying it.

In that part of the course wherein the study of light and shadow is commenced, the attention of the students should be directed, in the more elementary stage (4), to the mode of execution shown in the examples placed before them, and the study of gradations with which those examples supply them. In the more advanced stage "shading from the cast," in which the mode of execution is left to their choice, aided by previous experience, their attention should be turned to the principles of light and shade, such as breadth of masses; the relief to be obtained by contrast; the due interchange of hardness and softness of outline; the relative value and strength of shadow, cast-shadows and reflections, and the management of high-lights and half-lights. In some instances works in this stage, otherwise meritorious, have failed of success from too exclusive a reliance on mere execution.

The Examiners would emphatically counsel Masters of Schools of Art to discourage all systems and mannerism of execution, which, though possibly considered effective, have a tendency to interfere with the real object of all drawing, namely, a correct representation of form, and light and shade, with the point.

It has not been usual heretofore to place before the Examiners for awards "studies of the human figure shaded from flat examples." The original drawings from the life by Mr. Mulready having been circulated among the Schools during the past year, several studies have been submitted to us in this section, and their merit has entitled them to awards. We have thought it right to offer encouragement to this section of stage (6), which, with such fine examples provided for the purpose, may form a proper introduction to the future study of the living model.

A slight improvement is this year observable in the study of the antique, both "shaded" and "in outline from the round;" this has

permitted an extension of the awards in these stages. At the same time the Examiners would gladly see more zeal and intelligence evinced in this section. These qualities are more apparent in the anatomical section, in which some of the works approach excellence.

We regret that but few painted studies of flowers from nature have been submitted; such studies are especially valuable to the ornamentist, and should be encouraged in the schools. The works in stage 22 (sec. b and c,) are also less numerous than heretofore, nor are they quite so satisfactory as on former occasions. Less emphasis has been given to the characteristics of the flower forming the subject of the year, and the arrangement of colour in these works is not so commendable as usual. The works in section (d) of this stage are, on the contrary, more than usually numerous and excellent.

On the whole we think the instruction in the various schools is going on soundly, and with a tendency to improvement. The comparison of the awards of previous years with those of the present affords the best means of ascertaining the relative position of the schools to each other, as also the advance or retrogression of each as compared with its former and average efforts. (Table 2).

On a former occasion the Examiners recommended a gratuity to the Master of a School of Art for the success of his instruction as shown by the awards made to his students in the national competition. They again desire to recommend that a gratuity of 15*l.* be given to the Master of the Hanley School for the sound teaching evidenced by the awards made to his students in so many stages of the Departmental course.

(Signed)

C. L. EASTLAKE.

J. C. HORSLEY.

RICHD. REDGRAVE.

Appendix G.
REPORT OF
EXAMINERS
ON COMPE-
TITION FOR
NATIONAL
MEDAL-
LIONS.

Appendix G.

NATIONAL COMPETITION.

STUDENTS
REWARDED
AT
NATIONAL
COM-
PETITION.ALPHABETICAL LIST of STUDENTS rewarded at the NATIONAL
COMPETITION, 1860.

Names of Students.	School.	Stage rewarded.	Subject.
Adams, Stephen .	Hanley . . .	3 b.	Ornament in outline.
Archer, Henry .	Sheffield . . .	23 d.	Plastic design.
Barr, Peter .	Greenock . . .	5 b.	Ornament in chalk.
Barrett, Henry .	Finsbury . . .	9 b.	Anatomical study.
Bartlett, Anne .	Gower Street . . .	10 a.	Foliage in outline.
Bennett, John .	Hanley . . .	10	Figure in monochrome.
**Blair, John .	Paisley . . .	17 b.	A head from life.
Bly, Jabez .	Worcester . . .	14 a.	Fruit from nature.
*Boon, Wm. .	Hanley . . .	12 a. 22 b.	Ornament and design in monochrome.
Brain, George .	Stoke . . .	22 d.	Historic ornament.
Bradley, Basil .	Manchester . . .	17 b.	Figure from life.
*Brown, Eleanora .	Exeter . . .	10 a.	Foliage in outline.
Brown, Thomas .	Finsbury . . .	8 a.	Figure in outline.
Buckham, James S. .	Manchester . . .	6 b.	Figure after Mulready.
Caldwell, Jane .	Paisley . . .	14 a.	Flowers from nature.
Campbell, David .	Glasgow . . .	23 c.	Design.
Cary, William Henry	Male Training School	5 b.	Ornament in chalk.
Clews, William .	Hanley . . .	5 b.	Ornament in chalk.
Colquhoun, Adw. S.D.	Glasgow . . .	23 c.	Design for muslin.
Crump, Thomas G. .	Taunton . . .	3 b.	Ornament in outline.
*Edwards, John .	Stoke . . .	20	Foliage modelled.
Elmer, Margaret .	Bath . . .	4 b.	Ornament from the flat.
**Evans, Joseph B. .	Stoke . . .	22 a.	Flowers treated ornamentally.
Fairbank, George W.	Spitalfields . . .	22 d.	Historic ornament.
*Frost, James .	Coventry . . .	22 d.	Historic ornament.
Gamble, James .	Sheffield . . .	8 b.	Figure from the antique.
Gardner, Rowland .	Birmingham . . .	18 a.	Ornament modelled.
Gardner, Eliza .	Paisley . . .	14 a.	Flowers from nature.
Gladwin, George E. .	Male Training School	3 b. 10 a.	Ornament and flowers in outline.
*Gould, John .	Charterhouse . . .	9 c.	Anatomical studies.
Gransmore, Henrietta	Female Training School	12 a.	Ornament in monochrome.
Greenlees, James .	Glasgow . . .	8 a.	Figure in outline.
Gregory, James .	Sheffield . . .	18 a.	Ornament modelled.
Guthrie, Michael .	Newcastle-on-Tyne . . .	22 c.	Elementary designs.
*Hall, George .	Male Training School	8 b.	Figure from the antique.
**Hampton, Thomas	Hanley . . .	22 d.	Historic ornament.
Harman, Harriette E.	Dublin . . .	22 a.	Flowers treated ornamentally.
Hulme, William .	Hanley . . .	19 a.	The figure modelled.
Johnson, Henry .	Macclesfield . . .	9 a. 22 d.	Anatomy and ornament.
Kelsey, William .	Darlington . . .	23 a.	Mechanical drawing.
Key, Henry .	Male Training School	8 b.	Figure from the antique.
Kinkel, Johanna .	Female Training School	5 b.	Ornament in chalk.
Livesey, William .	Darlington . . .	22 d.	Historic ornament.
Lloyd, Jacob .	Macclesfield . . .	5 b.	Ornament in chalk.
Lunn, Richard .	Sheffield . . .	5 b.	Ornament in chalk.
***McFarlane, James	Paisley . . .	6 b.	Figure after Mulready.
Merry, Thomas .	Coventry . . .	12 a.	Ornament in monochrome.
Munn, Isabella .	Liverpool (S. District)	23 c.	Design.

* Has already been successful at one National Competition.

** Has been twice successful at the National Competition.

Students rewarded at National Competition. 105

List of Students rewarded—continued.

Appendix G.

Names of Students.	School.	Stage rewarded.	Subject.	STUDENTS REWARDED AT NATIONAL COM-PETITION.
Nunn, Walter J. W.	Spitalfields . . .	14 a.	Flowers from nature.	
*Oscroft, Samuel .	Nottingham . . .	12 a.	Ornament in monochrome.	
*O'Shea, Henry . .	Cork	9 a.	Anatomical studies.	
Palmer, Thomas . .	Carlisle	3 b.	Ornament in outline.	
Pedley, William . .	Male Training School	23 b.	Architectural design.	
Piggott, Isabella . .	Gower Street . . .	4 b.	Ornament from the flat.	
*Pritchard, Zachariah	Macclesfield . . .	6 b.	Figure after Mulready.	
**Proctor, Fanny . .	Newcastle-on-Tyne .	9 a. 15.	Anatomy and painting.	
Redfern, Richard . .	Manchester	4 b.	Ornament from the flat.	
Robson, George . . .	Rotherhithe	4 b.	Ornament from the flat.	
Rylands, Edith . . .	Warrington	10 a.	Foliage in outline.	
Shepherd, James . .	Aberdeen	12 a.	Ornament in monochrome.	
Strachan, James . .	Aberdeen	23 c.	Design.	
*Strangman, Elizabeth	Cork	10 b.	Foliage shaded.	
Stretch, Martha A. .	Warrington	23 c.	Design.	
Taylor, Pauline . . .	Bolton	4 b.	Ornament from the flat.	
*Theaker, George . .	Sheffield	23 d.	Plastic design.	
Thompson, Louisa M.	Female Training School	10 a.	Foliage in outline.	
Tunn, George	Paisley	8 b.	Figure from the antique.	
Todd, Emma M. . . .	York	10 a.	Foliage in outline.	
*Turner, Edwin P. . .	Sheffield	23 d.	Plastic design.	
Walton, William . . .	Hanley	3 b.	Ornament in outline.	
*Webb, Maria D. . . .	Dublin	16 a.	Figure in monochrome.	
Wigzell, Eliza	Exeter	14 a.	Flowers from nature.	
Wiles, Henry	Cambridge	3 b.	Ornament in outline.	
Willson, Samuel . . .	St. Martin's	10 b.	Foliage shaded.	
Wilson, Arthur	Sheffield	15	Still life in oil.	
Woof, William	Darlington	22 c.	Design.	

HONOURABLE MENTIONS, 1860.

**Blair, John	Paisley	8 b.	Figure from the antique.
Bowman, Andrew . . .	Glasgow	12	Ornament in monochrome.
Bradford, Harriette . .	Gower Street	16 a.	Figure in monochrome.
Broom, John	Paisley	23 c.	Design.
Brydall, Robert	Glasgow	8 c.	Figure from memory.
Carter, David	Coventry	15	Still life painted in oil.
Harman, Hester A. . . .	Dublin	22 a.	Flowers treated ornamentally.
Hopkins, Amelia H. . .	Worcester	15 a.	Flowers from nature.
Joy, Albert Bruce . . .	Male Training School	19 a.	Figure modelled.
Johnson, Henry	Macclesfield	12 a.	Ornament in monochrome.
Pickford, Ralph R. . . .	Sheffield	4 b.	Ornament from the flat.
Preston, Mary Ann . . .	Birmingham	19 b.	Head modelled.
Stephen, Thomas C. . . .	Penzance	10 b.	Foliage shaded.
Thompson, Alexander . .	Paisley	22 d.	Historic ornament.
White, Sarah	Waterford	4 b.	Ornament from the flat.

* Has already been successful at one National Competition.

** Has been twice successful at the National Competition.

(Signed)

C. L. EASTLAKE.
J. C. HORSLEY.
RICHARD REDGRAVE.

Appendix G. TABLE showing the NUMBER of LOCAL MEDALS and NATIONAL MEDALLIONS awarded to each SCHOOL of ART.

LOCAL
MEDALS
AND
NATIONAL
MEDAL-
LIONS
AWARDED.

Name of Schools.	1857.		1858.		1859.		1860.	
	No. of Local Medals.	No. of National Medallions.	No. of Local Medals.	No. of National Medallions.	No. of Local Medals.	No. of National Medallions.	No. of Local Medals.	No. of National Medallions.
Aberdeen . . .	5	1	10	3	9	1	17	2
Andover . . .	—	—	—	—	5	—	7	—
Basingstoke . . .	—	—	—	—	—	—	3	—
Bath . . .	4	1	6	1	16	—	19	1
Belfast . . .	4	—	8	—	—	—	—	—
Birkenhead . . .	4	—	7	1	4	—	5	—
Birmingham and branch at Spon Lane . . .	24	3	22	5	23	3	34	1
Bolton . . .	—	—	4	1	11	—	14	1
Bridgenorth . . .	—	—	—	—	—	—	1	—
Brighton . . .	—	—	—	—	—	—	6	—
Bristol . . .	4	1	7	—	18	1	18	—
Burnley . . .	—	—	—	—	—	—	4	—
Burslem . . .	13	4	16	4	16	—	—	—
Cambridge . . .	—	—	—	—	—	—	4	1
Carlisle . . .	4	—	—	—	11	—	13	1
Carmarthen and Swansea . . .	—	—	5	—	6	—	3	—
Carnarvon . . .	3	—	9	1	9	—	15	—
Cheltenham . . .	10	1	12	1	8	1	15	—
Chester . . .	3	—	4	—	8	—	6	—
Clonmel . . .	2	—	2	—	2	—	5	—
Cork . . .	14	3	21	1	15	1	22	2
Coventry . . .	18	3	13	2	14	1	22	2
Darlington . . .	—	—	—	—	13	—	17	3
Devonport . . .	—	—	—	—	—	—	1	—
Dublin . . .	—	—	—	—	—	—	—	—
School of Art . . .	14	2	26	1	20	1	28	2
Lace School . . .	15	2	13	2	—	—	—	—
Dudley . . .	5	—	9	1	—	—	—	—
Dundee . . .	8	—	20	1	13	1	23	—
Durham . . .	8	1	3	—	7	—	5	—
Edinburgh . . .	—	—	—	—	—	—	10	—
Exeter . . .	8	2	11	1	12	1	14	2
Glasgow . . .	25	5	20	3	19	1	23	3
Greenock . . .	—	—	2	—	6	1	7	1
Guildford . . .	—	—	—	—	—	—	—	—
Halifax . . .	—	—	—	—	—	—	4	—
Hanley . . .	7	4	21	8	25	7	21	7*
Hereford . . .	7	—	6	—	2	—	1	—
Ipswich . . .	—	—	—	—	—	—	8	—
Lancaster . . .	—	—	3	—	6	—	5	—
Leeds . . .	3	—	1	—	5	—	11	—
Limerick . . .	7	1	10	1	10	1	8	—
Liverpool, N. District . . .	3	—	5	—	9	—	7	—
Liverpool, S. District . . .	10	1	21	—	28	2	23	1
Llanelli . . .	—	—	—	—	—	—	2	—
Macclesfield . . .	9	1	3	1	6	3	6	3†
Manchester . . .	30	5	23	2	29	3	29	3

* 8 awards.

† 4 awards.

Local Medals and National Medallions awarded. 107

Number of Local Medals and National Medallions awarded to each
School of Art—continued.

Appendix G.

LOCAL
MEDALS
AND
NATIONAL
MEDAL-
LIONS
AWARDED.

Name of School.	1857.		1858.		1859.		1860.	
	No. of Local Medals.	No. of National Medallions.	No. of Local Medals.	No. of National Medallions.	No. of Local Medals.	No. of National Medallions.	No. of Local Medals.	No. of National Medallions.
Metropolitan Schools—								
Spitalfields	9	1	2	—	8	—	8	2
Female, 43, Queen's Square, formerly held in Gower Street.	16	10	10	3	22	3	26	2
Charterhouse	2	1	2	—	8	3	6	1
Finsbury	10	2	7	1	3	—	16	2
Rotherhithe	—	—	—	—	2	—	3	1
St. Martin's	7	1	15	1	25	2	22	1
South Kensington								
Female	11	2	10	—	16	—	20	3
Male	14	5	10	2	17	5	23	5*
Lambeth	—	—	2	—	1	1	12	—
Hampstead	—	—	—	—	1	—	—	—
Newcastle-under-Lyne	6	2	8	—	10	2	8	—
Newcastle-on-Tyne	13	2	13	1	11	1	14	2
Norwich	1	1	16	—	12	—	4	—
Nottingham	9	2	17	2	23	2	12	1
Paisley	15	1	6	2	6	2	10	5
Penzance	10	—	7	—	5	—	3	—
Petersfield	10	—	—	—	—	—	—	—
Plymouth	2	1	3	—	4	—	—	—
Sheffield	28	5	28	7	26	6	29	7†
Southampton and Romsey	3	—	5	1	10	1	15	—
Stirling	—	—	—	—	—	—	—	—
Stoke-upon-Trent	22	7	22	4	26	4	16	3
Stourbridge	3	1	7	—	10	—	7	—
Taunton	—	—	10	3	24	1	21	1
Tavistock	5	—	4	—	2	—	1	—
Truro	5	—	7	—	2	—	1	—
Warrington	23	2	26	2	25	2	21	2
Waterford	7	2	9	2	10	1	14	—
Wenlock and Coalbrookdale	—	—	9	1	12	—	7	—
Wolverhampton	7	—	12	—	—	—	17	—
Worcester	25	3	23	1	22	1	19	1
Yarmouth, Great	—	—	5	—	13	1	11	—
York	2	—	2	1	12	—	9	1
Number of Medals awarded.	536	92	651	75	758	67	861	76
Number of awards.	—	103	—	81	—	72	—	80
Number of those Students whose awards carry the 10% prize.	—	68	—	63	—	50	—	55

* 6 awards.

† 8 awards.

H. A. BOWLER.

Appendix G. **TABLE showing the DISTRIBUTION of the AWARDS among the various STAGES at the NATIONAL COMPETITION, 1860.**

DISTRIBUTION OF AWARDS.

STAGES.	No. of National Medallions awarded.	STAGES.	No. of National Medallions awarded.
1. Linear drawing by aid of instruments:		Brought forward . . .	
<i>a.</i> Linear Geometry . . .		11. Painting ornament from the flat or copies:	
<i>b.</i> Mechanical and machine drawing, and details of architecture from copies . .		<i>a.</i> In monochrome, either in water colour, oil, or tempera . . .	
<i>c.</i> Linear Perspective . . .		<i>b.</i> In-colours . . .	
2. Free-hand outline drawing of rigid forms, from examples or copies:		12. Painting ornament from the cast, &c.:	5
<i>a.</i> Objects . . .		<i>a.</i> In monochrome, either in water colour, oil, or tempera . . .	
<i>b.</i> Ornament . . .		13. Painting (general) from flat examples or copies, flowers, still life, &c.:	
3. Free-hand outline drawing from the "round:"	6	<i>a.</i> Flowers or natural objects, either in water colour, oil, or tempera . . .	
<i>a.</i> Models and objects . . .		<i>b.</i> Landscapes . . .	
<i>b.</i> Ornament . . .		14. Painting (general) direct from nature:	5
4. Shading from flat examples or copies:	5	<i>a.</i> Flowers or still life, either in water colour, oil, or tempera . . .	
<i>a.</i> Models and objects . . .		<i>b.</i> Landscapes . . .	
<i>b.</i> Ornament . . .		15. Painting groups as compositions of colour:	2
5. Shading from the round or solid forms:	6	<i>a.</i> In water colour, oil, or tempera . . .	
<i>a.</i> Models and objects . . .		16. Painting the human figure or animals in monochrome, from casts:	2
<i>b.</i> Ornament . . .		<i>a.</i> In water colour, oil, or tempera . . .	
<i>c.</i> Time sketching and sketching from memory.		17. Painting the human figure or animals in colour:	2
6. Drawing the human figure and animal forms, from copies:	3	<i>a.</i> From the flat, or copies . . .	
<i>a.</i> In outline . . .		<i>b.</i> From nature, nude or draped . . .	
<i>b.</i> Shaded . . .		<i>c.</i> Time sketches and compositions . . .	
7. Drawing flowers, foliage, and objects of natural history, from flat examples or copies:		18. Modelling ornament:	2
<i>a.</i> In outline } . . .		<i>a.</i> From casts . . .	
<i>b.</i> Shaded } . . .		<i>b.</i> From drawings . . .	
8. Drawing the human figure or animal forms from the round, or nature:		<i>c.</i> Time sketches from examples and from memory.	
<i>a.</i> In outline from casts . . .	2	19. Modelling the human figure, or animals:	1
<i>b.</i> Shaded . . .	4	<i>a.</i> From casts or solid examples . . .	
<i>c.</i> Studies of the human figure from nude model . . .		<i>b.</i> From drawings . . .	
<i>d.</i> " " draped . . .		<i>c.</i> From nature, nude or draped . . .	
<i>e.</i> Time sketching and sketching from memory.		20. Modelling fruit, flowers, foliage, and objects of natural history from nature.	1
9. Anatomical studies:		21. Time sketches in clay of the human figure or animals, from nature.	
<i>a.</i> Of the human figure . . .	3		
<i>b.</i> Of animal forms . . .	1		
<i>c.</i> Of either, modelled . . .	1		
10. Drawing flowers, foliage, landscape details, and objects of natural history from nature:			
<i>a.</i> In outline . . .	6		
<i>b.</i> Shaded . . .	2		
Carried forward . . .	30	Carried forward . . .	59

Distribution of the Awards among the various Stages—continued.

Appendix G.

DISTRIBUTION OF AWARDS.

STAGES.	No. of National Medallions awarded.	STAGES.	No. of National Medallions awarded.
Brought forward . . .	59	Brought forward . . .	70
22. Elementary design :		23. Applied designs, technical or miscellaneous studies :	
<i>a.</i> Studies treating natural objects ornamentally.	2	<i>a.</i> Machine and mechanical drawing, plan drawing, mapping, and surveys done from actual measurement.	1
<i>b.</i> Ornamental arrangements to fill given spaces, in monochrome.	1	<i>b.</i> Architectural design . . .	1
<i>c.</i> Ornamental arrangements to fill given spaces, in colour.	2	<i>c.</i> Surface design . . .	5
<i>d.</i> Studies of historic styles of ornament, drawn or modelled.	6	<i>d.</i> Plastic design . . .	3
		<i>e.</i> Moulding, casting, and chasing.	
		<i>f.</i> Lithography . . .	
		<i>g.</i> Wood engraving . . .	
		<i>h.</i> Porcelain painting . . .	
Carried forward . . .	70	Total	80

H. A. BOWLER.

APPENDIX I.

DETAILS of PRIZES ISSUED, 1860.				Appendix I.
				PRIZES ISSUED, 1860.
Slate Prizes	- Cases of Pencils	-	1,836	
First grade Prizes	- Small Drawing Boards	-	1,875	
" "	- Colour Boxes	-	673	
" "	- Grant's Geometry, &c.	-	7	
" "	- Cases of Compasses	-	230	
Second grade Prizes	- Cases of Instruments	-	830	
" "	- Boxes of Colours	-	1,070	
" "	- Large Drawing Boards, &c.	-	122	
" "	- Burchett's Geometry, &c.	-	556	
" "	- Wornum's Analysis, &c.	-	179	
" "	- Pencil Landscapes	-	54	
" "	- Sepia ditto	-	147	
" "	- Cases of Crayons	-	278	
" "	- Binns' Orthographic Projection, &c.	-	64	
Science Prizes	- Books	-	60	
Total			7,981	

W. G. GROSER, Storekeeper.

APPENDIX J.

Appendix J. AID by EXAMPLES granted to SCHOOLS for the POOR, MECHANICS' and other similar INSTITUTIONS for ARTIZANS, &c.

AID BY
EXAMPLES.

Locality.	Name of School or Institution.	No. of Pupils or Members.		Aid by Department.
		M.	F.	
Aberdeen	Free South Parish School	231	177	£ s. d. 0 16 10
Andover	School of Art	14	16	0 3 4
Arbroath	School of Art	50	20	9 3 4
Ashton-under-Lyne	St. Peter's National Day and Evening School	300	50	1 11 2
Bandon	Female Training Institute	-	-	0 9 5
Bangor	Normal College	20	-	9 18 11
Bath	School of Art	-	-	1 14 0
Belfast	Model National School	-	-	2 8 0
"	The Catholic Institute	36	4	13 18 1
Berwick-on-Tweed	British School	180	160	1 6 0
Beverley	St. Mary's National School	160	-	0 15 9
Birmingham	Cambridge Street Works School	250	-	0 15 10
"	Oratory School	12	-	1 0 0
"	St. Stephen's School	250	-	0 7 2
"	School of Art	695	144	0 18 6
Bolton	Mechanics' Institution	535	4	2 9 0
Bootle	National Schools	114	120	2 19 1
Braintree	Public School	98	33	0 8 8
Brechin	Parish School Drawing Class	25	5	0 15 10
Bridgnorth	School of Art	19	26	4 12 3
Bridgewater	Eastover, St. John's National School	82	80	1 6 2
"	Mount School	240	-	1 17 0
"	The Girls' General School	-	100	1 3 9
"	School of Art	-	-	5 14 6
Brighton	School of Art	-	-	4 0 2
Bristol	Christ Church District National School	70	50	0 12 8
"	Wesleyan Girls' School	-	54	0 8 4
Bromsgrove	Boys' National School	100	-	1 3 7
"	School of Art	34	12	4 18 5
Burnley	St. James's National School	158	122	0 10 1
Cambridge	School of Art	-	-	3 17 7
Cardiff	Bute Docks British School	189	86	1 3 10
Carmarthen	Endowed Schools	50	-	4 13 5
Carnarvon	School of Art	31	11	2 9 7
"	The Glandinoring School	50	70	1 5 5
"	Training College	-	-	1 13 3
Carlisle	School of Art	118	32	5 18 8
Castle Eden Colliery	National School	88	56	0 10 2
Cheetham Hill	St. Mark's Schools	121	145	0 14 3
Chelmsford	Mechanics' Institution	21	-	1 19 0
Chester	Diocesan School	267	-	0 11 2
Cheltenham	School of Art	-	-	0 15 1
"	Working Man's Club Rooms	270	-	0 7 2
Chichester	School of Art	23	18	3 1 1
Cirencester	Central School	31	15	0 1 0
"	Royal Agricultural College	40	-	3 9 3
"	School of Art	-	-	15 10 3
Collace	Parochial School	53	23	0 12 8
Collessie	Parish School	46	34	0 19 0
Cork	School of Art	-	-	2 6 5
Coventry	British School	200	-	1 9 0
"	Mr. Bayley's Charity School	50	-	1 7 0
Crewe	Mechanics' Institute	27	3	0 14 3
"	National School	210	-	1 0 0

Locality.	Name of School or Institution.	No. of Pupils or Members.		Aid by Department.	AID BY EXAMPLES.
		M.	F.		
Dalston	Drawing School	30	-	£ s. d.	0 5 6
Darlington	School of Art	-	-		1 6 5
"	Trinity National School	-	-		0 2 5
Devonport	St. James's Boys' National School	160	-		0 14 10
Dedbury	National School	80	-		0 12 0
Dodbrooke	National School	72	43		0 5 10
Droitwich	Mechanics' Institution	30	10		1 2 6
Dublin	St. Andrew's Parochial School	40	35		0 11 6
"	St. Michael's Parochial School	30	30		0 9 4
"	School of Art	-	-		0 13 0
"	Training and Model School	136	170		10 16 11
"	West Dublin Model School	-	-		2 15 10
Dudley	St. James's National School	110	-		4 3 0
Dulwich (College)	Upper and Lower Schools	214	-		3 7 5
Dundee	Chalmers' Industrial School	-	90		0 5 5
"	Free St. Andrew's School	164	132		0 15 10
"	Free St. David's School	144	174		1 3 6
"	Free St. Paul's School	-	50		0 9 4
"	Rosehand Sessional School	41	8		0 10 4
"	School of Art	220	80		11 19 10
Durham	Female Training School	-	4		3 9 9
Eastington	Wesleyan School	42	26		0 7 6
Eastwood	Boys' and Girls' School	150	70		0 13 0
Edinburgh	McLean's Sessional School	87	61		0 9 10
"	Newington Free Church School	119	114		1 10 6
"	Rev. D. A. Thomson's School	286	154		0 9 2
"	School of Art	220	220		9 12 5
Fenton	National School	50	-		0 8 6
Galashiels	St. Peter's Episcopal School	32	-		0 12 3
Garston	National School	90	65		0 19 11
Glasgow	Deaf and Dumb Institution	42	28		0 12 0
"	Established Normal Training School	62	53		1 4 4
"	Finniston Free Church School	186	94		0 10 6
"	Free Normal Training School	100	86		1 4 4
"	St. Mungo's Roman Catholic School	303	-		1 13 3
Gloucester	School of Art	45	35		0 1 0
Guildford	Union of Schools	-	590		3 17 4
Halifax	Sion Chapel Day School	25	6		0 13 5
Halliwel	St. Paul's National School	140	-		1 1 6
Hanley	School of Art	-	-		2 12 11
Helensburgh	Quod Sacra School	60	56		1 6 7
Hereford	Blue Coat School	140	-		2 0 2
"	Scudamore National School	130	-		0 7 8
Honfield	Edmund Trust National School	59	-		0 7 0
Jedburgh	Jedburgh Academy	40	-		0 18 6
Ipswich	School of Art	34	40		1 13 6
Keswick	Brigham National School	14	6		0 8 6
Kemberworth	National School	138	12		1 13 6
Kirremuir	Webster's Seminary Drawing Class	50	10		0 6 2
Leamington	British School	240	-		0 10 5
Leeds	Parley National School	41	40		0 16 8
"	Holbeck Wesleyan School	71	57		1 19 7
"	St. George's School	239	-		1 13 5
"	School of Art	146	122		6 5 4
Limerick	Model National School	-	-		0 19 0
"	School of Art	30	16		4 0 0
Liverpool	Roman Catholic Female Training School	-	8		1 1 6
"	St. Augustine's National School	170	-		2 1 10
"	St. Chrysostome's Everton National School	201	30		0 4 7
"	St. Mary's Edre Hill School	120	-		0 6 7
"	St. Saviour's School	90	100		0 14 1
"	School of Art, South District	-	-		0 5 2
"	South Church of England School	28	22		0 4 7

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Appendix J.

AID BY
EXAMPLES.

Locality.	Name of School or Institution.	No. of Pupils or Members.		Aid by Department.
		M.	F.	
Llandoverly -	Welsh Collegiate Institution -	15	-	£ s. d. 4 1 4
London -	St. Philip's Orphanage -	71	-	2 19 3
Battersea -	Durham House Academy -	34	-	0 8 2
Brompton -	Parochial National School -	160	-	0 8 4
Clapham -	Parochial School -	-	-	1 15 6
Clapham Road -	British Orphan Asylum -	61	31	0 10 6
Clapton -	London Orphan Asylum -	290	110	0 13 2
Fulham -	National Boys' School -	95	-	0 10 10
Gray's Inn Road -	Home and Colonial Training School -	83	115	3 0 5
Haggerstone -	All Saints' School -	150	-	0 15 10
Islington -	Union Chapel Boys' School -	110	-	0 8 10
Kennington -	Bolton Street National School -	75	18	0 6 1
Kingsland -	Birkbeck Schools -	46	34	0 12 11
Lambeth -	British School -	290	-	0 7 10
Marylebone -	Trinity District Girls' School -	-	76	0 15 1
Peckham -	Birkbeck Schools -	400	150	0 7 0
Portman Square -	St. Thomas's Schools -	150	50	0 7 2
Regent Street -	Polytechnic School -	-	-	3 6 1
St. John's Wood -	St. John's School -	176	-	1 2 0
St. Martin's -	School of Art -	-	-	3 6 0
St. Pancras -	National School -	300	280	0 7 10
Spitalfields -	The Domestic Mission School -	92	-	0 6 1
Upper Holloway -	St. John's National School -	150	150	0 9 8
Walworth -	Beresford Episcopal Chapel School -	150	-	1 9 0
Waterloo Road -	Hawkstone Hall School -	50	-	0 7 10
Westminster -	St. Stephen's Girls' School -	-	62	0 7 6
" -	St. James's National School -	55	-	0 10 10
Macclesfield -	Christ Church School -	90	146	3 3 6
" -	School of Art -	-	-	0 10 2
Manchester -	St. Catherine's Church of England National School -	100	180	3 11 7
" -	St. Philip Hulme National School -	160	150	1 13 10
" -	St. Wilfrid's Boys' School -	121	-	0 1 9
" -	School of Art -	203	52	0 8 2
Newcastle-under-Lyme -	Commercial School -	33	-	0 3 5
" -	School of Art -	-	-	1 7 7
Newport -	Athenæum and Mechanics' Institute -	13	-	0 18 3
Nottingham -	People's College Day School -	155	-	0 11 4
" -	St. Mary's Girls' School -	-	150	0 8 6
" -	School of Art -	150	20	3 9 0
Norwich -	School of Art -	70	38	1 12 9
Oldbury -	National Schools -	130	80	1 0 5
Old Cumnock -	Free Church School -	140	67	2 1 4
Paisley -	Poor Schools in connexion with School of Art -	-	-	0 13 10
Parsonstown -	Model National School -	-	-	2 13 8
Penkridge -	Boys' National School -	260	-	0 13 2
Perth -	Sharp's Educational Institution -	135	157	1 9 7
" -	Stewart's Free Trade School -	96	-	2 4 9
Pitcairn Green -	Free Church School -	66	48	0 3 5
Plymouth -	Charles National School -	400	-	2 2 4
" -	Free School -	700	260	0 17 11
Preston -	All Saints' National School -	110	-	0 9 1
" -	School of Art -	-	-	54 6 0
Rawmarsh -	Free Grammar School -	110	-	0 17 8
Reading -	St. John's National School -	75	-	1 4 10
" -	School of Art -	-	-	19 12 9
Romsey -	British School -	135	-	0 7 6
Sandown -	National School -	63	48	0 11 11
Salford -	St. John's Roman Catholic Schools -	350	450	3 19 7
Sheffield -	High Green British Schools -	57	56	0 10 8
" -	Holy Trinity National School -	250	-	0 9 11
" -	School of Art -	-	-	1 19 9
Shrewsbury -	School of Art -	40	20	0 13 6

Locality.	Name of School or Institution.	No. of Pupils or Members.		Aid by Department.	AID BY EXAMPLES
		M.	F.		
					£ s. d.
Sutton -	National School -	116	-	-	0 18 2
Southampton -	Freemantle Church of England School -	110	70	-	3 2 2
Sowerby -	National Model School -	70	90	-	0 15 8
Stapleton -	Bristol and Gloucester Training School -	-	80	-	2 1 4
Stoke Damerel -	Stoke Public School -	108	121	-	0 15 5
Stroud -	School of Art -	-	-	-	0 2 1
Stroud -	National School -	80	120	-	0 12 3
Sutton -	National School -	42	33	-	0 1 9
Sutton-in-Kildwick -	National School -	124	115	-	0 6 2
Swansea -	Normal College -	180	-	-	1 18 10
Tarporley -	Tilstone School -	71	58	-	1 18 2
Taunton -	Wilton Parochial School -	16	16	-	0 7 0
Trowbridge -	Trinity National School -	69	102	-	0 8 0
Warrington -	Heathside Schools -	400	300	-	0 18 2
" -	Oxford Church of England School -	59	49	-	2 2 8
" -	School of Art -	-	-	-	0 19 2
Wellington -	Messrs. Fox's British School -	120	-	-	0 15 5
" -	Wesleyan Day School -	76	36	-	1 14 0
Wivenhoe -	National School -	73	32	-	1 4 4
Wolverton Station -	British School -	114	95	-	1 1 8
Worcester -	College School -	58	-	-	1 12 11
Yarmouth -	School of Art -	-	-	-	0 4 10
York -	Micklegate National Boys' School -	120	-	-	1 12 7
" -	York and Ripon Training School -	79	32	-	1 13 6
	SCIENCE.			£	417 14 9
Aldershot -	21st Fusiliers Scientific Institution -	126	-	-	1 1 3
Almondbury -	Central School, Chemical Class -	13	-	-	7 9 0
Birkenhead -	St. Ardain's College -	58	-	-	6 1 0
Birmingham -	School of Practical Science of the Birmingham and Midland Institute -	47	-	-	5 14 9
Chester -	Training College -	-	-	-	0 5 0
Dollar -	Dollar School -	251	205	-	2 13 4
Dublin -	Committee of Lectures -	-	-	-	15 13 11
" -	Erasmus Smith's School -	90	65	-	1 8 0
Glasgow -	Carlton Place Secular Schools -	130	72	-	10 9 8
Halifax -	Working Man's College -	23	-	-	10 8 5½
Huddersfield -	Literary and Scientific Society -	23	-	-	8 7 1
London -	Chelsea Royal Military Asylum -	500	-	-	1 3 4
" -	Chelsea St. Mark's College -	-	-	-	1 10 6
" -	St. Thomas's Charterhouse -	400	-	-	10 0 0
Liverpool -	School Frigate Conway -	-	-	-	5 8 4½
Manchester -	Mechanics' Institution -	90	-	-	4 10 2
Melton Mowbray -	Free Church School -	190	200	-	1 15 0
Omagh -	Model National School -	-	-	-	1 14 0
Truro -	Royal Institution of Cornwall -	-	-	-	5 17 1
Yarmouth -	Navigation School -	-	-	-	0 1 3
				£	101 11 2

W. G. GROSER, Storekeeper.

DOCUMENTS RELATING TO THE ADMINISTRATION
OF THE SOUTH KENSINGTON MUSEUM.

APPENDIX K.

Appendix K REPORT of the INSPECTOR-GENERAL for ART on the BRITISH
PICTURES at SOUTH KENSINGTON..

REPORT OF
THE
INSPECTOR-
GENERAL
FOR ART
ON THE
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PICTURES.

I HAVE the honour to report on the British pictures under my charge, on the general state of these collections, and the additions that have been made to them during the past year.

First, as to the preservation of the pictures. In my last year's report I alluded to the danger to which pictures near the eye were exposed, arising from the close inspection to which they are often submitted, and that to prevent accidental injuries, such pictures were being gradually placed under glass. This course has been continued during the past year, and many of the most delicate pictures by this means secured from injury.

The means of regulating the warmth of the galleries continues to have my best and constant attention, with a view to secure the pictures from danger, the comfort of the visitors, and that of the students. These conditions, however, are often conflicting. The pictures must always have the first consideration, but it at times becomes a matter of difficulty, and sometimes of complaint, that the proper temperature and the free ventilation required for that purpose interferes with the other two conditions. In the winter time, persons coming in from the outer air, wrapped up for protection against an atmosphere many degrees below freezing, are apt to be startled at a moderate heat within doors, and to think the safety of works of art thereby endangered, while those seated for hours in the same atmosphere, on the contrary, think the temperature far too low, and complain of the drafts necessitated by ventilation. Thermometers are hung in various parts of each room (and even on the lower parts of the pictures supposed to be most exposed to changes of temperature), and during stated times of each day and every evening these indications are carefully registered. I append an abstract of these registers, giving the average heat, and in each quarter of the year the highest and lowest accidental ranges, and I think it is not too much to assert that no danger whatever to the works of art can have arisen from a temperature which has on no occasion during the six months of the year when the galleries are artificially heated, even by accident, reached within some degrees of "summer heat," and whose highest monthly average during that period is only 6° above temperate (55°), the air *not* being *dried* in the process of warming, but drawn immediately

from the outer atmosphere into the galleries, which are thus more equable than most rooms in private houses where pictures are arranged.

It will be remembered that in 1859 a commission was appointed by the Board, consisting of Professors Faraday, Hofmann, and Tyndall, together with Captain Fowke, R.E., and myself, and that we were unanimous in reporting that,—“There is nothing innate in coal gas which renders its application to the illumination of picture galleries objectionable. Its light, though not so white as that of the sun, is equally harmless; its radiant heat may be rendered innocuous by placing a sufficient distance between the gas jets and the pictures, while the heat of combustion may be rendered eminently serviceable, in promoting ventilation.”

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REPORT OF
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The report further went on to say that while it is “not safe to permit the product of combustion to come in contact with pictures, painted either in oil or water colours, the Commission have examined the Sheepshanks’ Gallery as an experimental attempt to light pictures with gas, and are of opinion that the process there carried out fulfils the condition of effectually illuminating the pictures, and at the same time removing the products of combustion. According to the indications of the thermometer required and obtained, it does this in harmony with, and in aid of, the ventilation, and does not make a difference of more than one degree Fahrenheit at the parts where the pictures are placed, between the temperatures, before and after the gas is lighted.”

This carefully considered report, emanating from some of the first scientific men of the day, may safely be considered to set at rest any question as to danger to the pictures from increased heat, impure air &c., produced by this mode of lighting.

The Keeper of the National Gallery having expressed a wish that a screen should be placed between the warm water pipes and the pictures to guard them from the heat, (which however did not influence the thermometers beyond two or three degrees,) by the direction of the Board this screen has been fixed to the satisfaction of the Director.

In my last report I noticed that one or two pictures originally executed with dangerous materials, and brought in an injured state into the new galleries, had been photographed to register that state, and to serve to test any progress of the injury. From time to time I have examined these works and have found that the evils are not progressing. At the same time it must be stated that other equally faultily painted pictures wherein asphaltum has been used as a pigment, or macgilp much too freely as a vehicle, must be expected to progress in decay, and that no known means, under any kind of care, will entirely preserve them, either in public galleries or private collections; but the defects and injuries of all British pictures, placed by the Trustees of the National Gallery under the charge of the Department, were carefully inspected and registered; individually by myself and Mr. Robinson, jointly with Sir C. Eastlake when first received, and the same was done also with respect to the pictures the gift of Mr. Sheepshanks. This registry can at any time be referred to, to test the past and present state of the pictures.

2ndly. As temporary and permanent additions to the collection.

Following out the practice adopted in all sections of the South Kensington Museum of receiving works of art, on loan, to exhibit with the general collections, several valuable contributions have been offered and

Appendix K. accepted on these terms. The following persons have been contributors during the past year :—

THE INSPECTOR- GENERAL FOR ART ON THE BRITISH PICTURES.	Mr. James Bell	-	-	4	oil paintings.
	Mr. Alfred Chalon	-	-	2	water-colour paintings.
	Mr. C. W. Dilke	-	-	8	" "
	Mr. Dyer Edwards	-	-	2	" "
	Mr. Field	-	-	1	" "
	Mr. Seymour Haden	-	-	1	" "
	Sir P. Fairbairn	-	-	1	" "
	Miss Le Mann	-	-	4	" "
	Mr. Lewes Lloyd	-	-	1	" "
	Mr. Pryor	-	-	1	" "
	Mr. Pococke	-	-	1	" "
	Mr. Medwin	-	-	1	" "
	Mr. Mulready	-	-	3	" "
	Mr. W. Sandby	-	-	2	" "

Mr. Sheepshanks, as part of his gift of pictures, had included a few water-colour paintings, intended by him to initiate the formation of a National Collection of Water-Colour Art, and I have the gratification to report that during the past year, Mrs. Ellison, of Sudbrooke Holme, acting in the spirit of the wishes of her late husband, empowered the President of the old Society of Water-Colour Painters to offer to the Department a valuable collection of 51 water-colour paintings to further the formation of such national collection, accompanied with an additional promise of 50 more at some future period. Mrs. Ellison has also given a valuable marble bust of her late husband, by Westmacott, which is now placed in the sculpture collection. Mr. Delamotte also offered three valuable works for the same purpose. These gifts have been accepted and arranged together with about 40 more, by early British Masters practising this branch of art, which were, at various times, purchased with the sanction of the Board, and a catalogue, with a short historical preface, prepared and issued to illustrate them.

In conclusion, I feel confident in reporting that the pictures under my charge are so exhibited as to combine their best display to the public with usefulness to the student and the utmost possible security to the works themselves.

RICHARD REDGRAVE.

GALLERIES containing the NATIONAL GALLERY PICTURES.

Temperature for the Year ending 31st December 1861.

Appendix K.

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WINTER QUARTER.

The highest temperature occurred on the evening of March 20th, thermometer reading 66°; outside temperature 55°. The lowest was on the morning of the 20th December, thermometer reading 43°; outside temperature 39°.

SPRING QUARTER.

The highest temperature occurred on the afternoon of May 26th, thermometer reading 71°; outside temperature 67°. The lowest was on the morning of April 24th, thermometer reading 53°; outside temperature 35°.

SUMMER QUARTER.

The highest was on the evening of July 3rd, thermometer reading 72°; outside temperature 71°. The lowest on the morning of September 11th, thermometer reading 57°; outside temperature 56°.

AUTUMN QUARTER.

The highest was on Monday, October 1st, thermometer reading 69°; outside temperature 59°. The lowest on Thursday, December 20th, thermometer reading 50°; outside temperature 33°. On Wednesday, December 25th, 1860, the boilers being out of repair, the thermometer reading 32°; outside temperature 26°.

AVERAGE.

Long Gallery of British Paintings.

Average of Gallery	-	-	-	-	-	58°
„ bottom of paintings	-	-	-	-	-	61°
„ top of paintings	-	-	-	-	-	60°

Vernon Rooms.

Average of rooms	-	-	-	-	-	59°
„ bottom of paintings	-	-	-	-	-	61°
„ top of paintings	-	-	-	-	-	60°

Turner Rooms.

Average of rooms	-	-	-	-	-	59°
„ bottom of paintings	-	-	-	-	-	61°
„ top of paintings	-	-	-	-	-	60°

GEORGE KING,
Attendant on Ventilation.

Appendix K. TABLE showing the HIGHEST and LOWEST TEMPERATURE in the SHEEPHANKS' GALLERY.

REPORT OF
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No. 1 Room.				No. 2 Room.			
—		Highest.	Lowest.	—		Highest.	Lowest.
January	- -	61	43	January	- -	63	49
February	- -	63	43	February	- -	64	48
March	- -	63	48	March	- -	64	51
April	- -	68	50	April	- -	69	50
May	- -	71	54	May	- -	73	56
June	- -	68	57	June	- -	68	59
July	- -	70	58	July	- -	71	60
August	- -	67	59	August	- -	70	61
September	- -	69	51	September	- -	70	53
October	- -	64	49	October	- -	67	47
November	- -	60	45	November	- -	64	48
December	- -	59	38	December	- -	62	44

No. 3 Room.				No. 4 Room.			
—		Highest.	Lowest.	—		Lowest.	Highest.
January	- -	64	50	January	- -	46	65
February	- -	64	47	February	- -	48	61
March	- -	66	53	March	- -	50	63
April	- -	66	52	April	- -	49	65
May	- -	72	56	May	- -	53	71
June	- -	69	57	June	- -	56	68
July	- -	72	59	July	- -	57	76
August	- -	70	62	August	- -	60	68
September	- -	71	55	September	- -	52	68
October	- -	66	50	October	- -	47	64
November	- -	64	48	November	- -	43	59
December	- -	63	40	December	- -	33	60

OUTSIDE AVERAGE TEMPERATURE.—1860.

Dates.	Monthly Average.	Dates.	Monthly Average.
January - - -	44	July - - -	70
February - - -	40	August - - -	66
March - - -	47·5	September - - -	59
April - - -	50	October - - -	56
May - - -	64	November - - -	44·5
June - - -	63	December - - -	39

Registry taken at 10 a.m., 1 p.m., and 3 p.m.

F. POWELL,
Sapper, Royal Engineers.

Report on British Pictures at South Kensington. 121

MONTHLY AVERAGE TEMPERATURE of the Sheepshanks Gallery.
1860.

The Thermometers were registered at 10 a.m., 1 p.m., and 3 p.m.

Appendix K
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No. 1 Room.		No. 2 Room.	
Dates.	Monthly Average.	Dates.	Monthly Average.
January - - -	53	January - - -	55.5
February - - -	54.5	February - - -	58.5
March - - -	56	March - - -	59
April - - -	56.5	April - - -	58
May - - -	63	May - - -	64
June - - -	62.5	June - - -	63.5
July - - -	66	July - - -	67
August - - -	63.5	August - - -	65
September - - -	57.5	September - - -	60
October - - -	58.5	October - - -	60
November - - -	54	November - - -	57
December - - -	52	December - - -	56

No. 3 Room.		No. 4 Room.	
Dates.	Monthly Average.	Dates.	Monthly Average.
January - - -	50	January - - -	55
February - - -	59	February - - -	55.5
March - - -	60	March - - -	57
April - - -	57.5	April - - -	55
May - - -	64	May - - -	63.5
June - - -	64.5	June - - -	62
July - - -	69	July - - -	67
August - - -	65	August - - -	64
September - - -	62	September - - -	58.5
October - - -	60	October - - -	58.5
November - - -	57	November - - -	53
December - - -	61	December - - -	52

Registry taken at 10 a.m., 1 p.m., and 3 p.m.

F. POWELL,
Sapper, Royal Engineers.

APPENDIX L.

Appendix L. REPORT of the SUPERINTENDENT of the ART COLLECTIONS.

REPORT OF MR. ROBINSON ON ART COLLECTIONS. THE increase of the collection has been equal to that of previous years, and in one important section, that of mediæval and renaissance sculpture, especial progress has been made.

The number of specimens of every kind now amounts to upwards of 7,500.

A new edition of the Inventory has been compiled, and is nearly ready for publication.

No change has taken place in respect to the exhibiting space allotted to the collection since last year's report, and consequently it is impossible to effect any more systematic classification than the present entirely provisional one. In default, however, of more complete arrangement, which can only be effected when the new buildings now in progress are finished, the system of labelling every object which may seem to require special illustration has been much more completely carried out, and at present very few specimens are without explanatory labels.

I have already stated that the principal acquisitions this year have been in the class of sculpture; the specimens are mainly works of Italian origin of the fifteenth and sixteenth centuries, and an important link in the chain of high art, heretofore unrecognized in our national collections, has thus been added. The desirability of embracing every opportunity for the acquisition of specimens of sculpture, especially such as seemed likely to occur at this period in Italy, has been kept steadily in view, and during the lengthened journey in that country which I was directed to make in the autumn, upwards of one hundred and twenty specimens of sculpture were obtained. This very considerable augmentation of our mediæval sculpture collection renders it, in many respects, richer and more complete than that of any other public museum.

A series of eighty-five pieces were purchased "*en bloc*" in Rome, being the bulk (all that it was desirable to acquire) of the Gigli and Campana collections of mediæval sculpture; amongst them are original works in marble or terra cotta, of the highest artistic and historical value, of Michael Angelo, Donatello, Lorenzo Ghiberti, Rossellino, Jacopo della Quercia, Matteo Civitale, Desiderio da Settignano, the Della Robbia, and many other of the greatest sculptors of the period of the revival of art. These collections, virtually the property of the Papal government, having been deposited in the Monte de Pietà in Rome as security for money advanced, were, after a lengthy negotiation, finally acquired for the sum of 5,836*l.*, being considerably less than the amount originally advanced on them, and about one half only of their value as estimated by a commission of the academy of St. Luke.

It will not be possible to exhibit this series in its entirety until the completion of the new courts which are now in progress; it is ultimately, however, intended to assemble together all the specimens in the class of sculpture, and the analogous categories of ornamental bronzes, medals, &c., and to supplement them by a limited number of plaster casts, photographs, &c., of remarkable works which are still *in situ* in the churches, museums, &c., of the continent, especially of such as are typical of the styles and characteristics of their several authors.

The loans of works of art to the Museum have been equal in value and number to those of former years, their extent has been only determined by the space available for their reception. However rich the permanent collections of the Museum may become, I am strongly of

opinion that the system of receiving objects on loan should suffer no abatement; it is popular with the possessors of fine works of art, and highly appreciated by the general public. A list of loans during this year is appended.

Appendix L.
—
REPORT
OF MR.
ROBINSON
ON
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LECTIONS.

The circulation of specimens to the various provincial schools and other institutions in connexion with the Department has been gradually on the increase. The principal travelling collection has been re-organized and more than doubled in extent; it is kept constantly in circulation from town to town, and the accompanying return will afford the best evidence of its utility. A far more extensive series of specimens than can be conveniently abstracted from the Central Museum might indeed be sent round the country, and the acquisition of objects with this special intention ought soon to be taken into account.

No change has taken place in the collection of architectural casts; the inadequacy of the exhibiting space alike precludes any new additions, or any re-arrangement of the existing specimens.

Pending the completion of the new galleries and courts now in course of construction, the specimens in every section are being carefully examined, repairs and restorations, where necessary to the conservation or proper illustration of the several objects, are systematically carried on, so that when the time arrives for the entire re-arrangement of the collection, every specimen may be displayed to the utmost advantage.

These and other desiderata when finally accomplished, will, I doubt not, enhance the obvious importance and also the real utility of the collection to an extent which at present can scarcely be foreseen.

(Signed) J. C. ROBINSON.

LOANS to the ART MUSEUM during 1860.

- Her Majesty the Queen. Medallion, in terra cotta, and a pair of Italian fire-dogs.
- His Grace the Duke of Devonshire. Collection of antique gems, jewellery, &c. (Upwards of 500 specimens.)
- Sir F. E. Scott, Bart. A collection of Limoges painted enamels, and two Sèvres porcelain cups and saucers. (14 specimens.)
- A. Barker, Esq. Collection of objects in majolica ware and rock crystal. (19 specimens.)
- M. Blackmore, Esq. A series of seven French 15th century missal paintings.
- Miss. S. Clarke. Chinese enamelled cup and saucer.
- C. W. Dilke, Esq. An Indian gold bracelet.
- G. Eastwood, Esq. Collection of antique Greek, Roman, and Anglo-Saxon jewellery. (37 specimens.)
- G. Field, Esq. Collection of various objects in bronze, enamel, porcelain, &c. (29 specimens.)
- Mrs. Ford. Jewel in enamelled gold.
- R. Goff, Esq. A collection of carvings in ivory, &c. (73 specimens.)
- E. Greaves, Esq. Carving in limewood.
- L. Lucas, Esq. A series of drawings by ancient masters. (15 specimens.)
- H. Macmanus, Esq. Medallion in carved box-wood.
- H. Magniac, Esq. A Gothic mazer bowl and an ivory crozier.
- C. K. Mainwaring, Esq. German porcelain vase and various specimens of jewellery. (14 specimens.)
- General Malcolm. Collection of Indian decorative arms. (33 specimens.)
- G. H. Morland, Esq. Collection of various objects of art, majolica, porcelain, enamels, bronzes, &c. (111 specimens.)
- R. Napier, Esq. Statuette in carved ivory, and an ornamental 17th century carriage watch. (2 specimens.)
- R. C. Naylor, Esq. Three Chelsea porcelain vases.
- A. Nesbitt, Esq. A Persian earthenware bowl.
- Mrs. Frazer Redgrave. An Oriental porcelain bowl.
- R. Riddell, Esq. A cinque cento pendant jewel.

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Appendix L. Rev. J. C. B. Ridell. A picture by Sir Joshua Reynolds.
 REPORT OF MR. ROBINSON ON ART COLLECTIONS. D. B. Robertson, Esq. A Chinese enamel and a carved jade vase.
 Rev. Dr. Rock, D.D., A "super altare," or portable altar, decorated with niello work.
 M. Uzielli, Esq. Collection of various objects, majolica ware, bronzes, jewellery, &c. (69 specimens)
 H. Vaughan, Esq. A Venetian carved wood stall chair, original drawings by Flaxman and Stothard. (64 specimens.)
 E. Waterton, Esq. Dagger with damascened blade.
 J. Webb, Esq. Collection of antique jewels. (About 170 specimens.)
 Mrs. H. White. A piece of ancient lace.

OBJECTS PRESENTED to the MUSEUM during 1860.

Her Majesty the Queen. Sixteen specimens of oriental porcelain.
 H.R.H. the Prince Consort. Three panels of engraved glass, vase in Berlin porcelain, and six modern terra cotta busts.
 Sir James Hudson, K.C.B. Bronze crucifix, Venetian glass bottle, and five other objects.
 Count Cornaro. Three pieces of modern Venetian glass.
 Miss Bulley. Piece of carved oak from the Star Chamber, Westminster.
 H. Farrer, Esq. A specimen of old Liverpool porcelain.
 Colonel Guthrie. An intaglio and a cameo. English, 18th century work.
 Rev. T. Nann. Portion of an altar cloth.
 National Gallery, Trustees of. Bust in white marble, by P. J. David d'Angers.
 M. Protat. Bust in Parian porcelain.

SUMMARY of General Results of the CIRCULATING MUSEUM from its institution in February 1855, down to September 1859 inclusive.

Town.	Date.	No. of Days the Exhibition was open in each Town.	Total Visitors.	Total Receipts.
				£ s. d.
Birmingham	February, March, and April, 1855	39	12,711	96 0 11
Nottingham	April, May, and June	37	5,572	21 10 10
Macclesfield	June, July, and August	45	12,941	108 12 8
Norwich	September, October, and Nov.	41	2,657	20 15 5
Leeds	Nov., Dec., and Jan., 1855-6	40	21,508	119 12 9
Sheffield	January, Febry., and March, 1856	42	4,935	52 2 3
York	March and April	41	4,094	58 7 1
Newcastle on Tyne	May and June	24	1,941	18 1 2
Carnarvon, N.W.	July	22	1,310	6 7 7
Hanley (Potteries)	August, September, and Oct.	42	20,572	208 16 5
Stourbridge	December and January, 1856-7	32	667	8 15 5
Worcester	February and March 1857	29	2,869	21 13 10
Liverpool	March, April, and May	36	16,965	169 2 0
Glasgow	May, June, and July	55	5,830	60 2 11
Paisley	August, September, and Oct.	31	3,340	14 8 1
Dundee	November and December	21	6,343	66 6 5
Aberdeen	January	22	15,451	67 1 0
Belfast	February and March	28	3,322	36 2 10
Dublin	April, May, and June	65	55,322	1,095 4 2
Limerick	July and August	38	10,527	171 0 1
Clonmel	September and October	46	13,998	178 18 6
Waterford	Nov., Dec., and Jan., 1858-9	39	15,685	188 10 10
Devonport	March and April 1859	30	9,165	176 18 8
Exeter	April, May, and June	34	12,485	300 7 7
Barnstaple	May and June	5	32,399	2,437 17 9
Taunton	August and September	23	14,368	308 9 8
		908	306,937*	6,011 7 10

* Of these visitors, 157,508 attended in the morning, and 149,389 in the evenings. 15,146 catalogues were sold, 2,106 articles copied, and 7,155 season tickets sold.

SUMMARY of RESULTS of the TRAVELLING COLLECTION, from June to December 1860, inclusive.*

Name of Town.	Date.	Days Open.	Visitors.				Catalogues Sold.		Articles Copied.	Season Tickets Sold.	Total Receipts.
			Morning.		Evening.		Museum Collection.	Local Collection.			
			Paid.	Cards.	Paid.	Cards.					
Dorchester -	June 4 to June 8 -	5	22,658	14,500	—	—	—	1,700	—	—	£ s. d. 2,009 7 0
Dudley -	July 16 to August 29 -	31	645	197	4,315	194	196	406	—	13	104 4 7
Hartshill (Stoke) -	August 28 to September 29 -	29	325	402	1,272	752	136	—	12	39	28 7 11
Bridgnorth -	October 15 to October 30 -	14	1,448	1,389	3,160	881	256	620	—	204	139 10 9
Salford† -	November 27 to December 31		No. of Visitors about				—	—	—	—	—
											30,000
											82,138
											2,341 10 3

* The Travelling Collection having been remodelled and increased was again put in circulation in June 1860.

† As the collection remained at Salford until March 1861 the complete returns cannot yet be ascertained.

(Signed) J. C. ROBINSON.

Appendix
REPORT
OF MR.
ROBINSON
ON
ART COL-
LECTIONS

Appendix L.

REPORT of the KEEPER of the ART LIBRARY.

REPORT
OF MR.
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ON
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THE number of subscribers to the Art Library has greatly increased during the past year; it is now open to students of the schools and the public generally during the same time as the Museum, through which it is necessary to pass to get access to it.

A more liberal arrangement has been effected in respect to subscribers' tickets of admission. At present these tickets admit the holder to the Museum generally, and to the Educational as well as the Art Library.

The new room in which the Library is now located having been constructed as an exhibiting room for the Museum, and not especially as a library, does not afford sufficient accommodation either for books or for readers. The room is, however, only temporarily occupied. A separate reading room is even now urgently required, the ordinary routine work of the library causing frequent interruptions to the students, in whose presence it is necessarily carried on.

The collection has been steadily augmented, as in previous years, by purchases of books, drawings, engravings, photographs, &c., and donations have likewise been received from the following persons:—

His Royal Highness the Prince Consort.	W. A. Mercer, Esq.
J. Denham, Esq.	Walter Smith, Esq.
W. Delamotte, Esq.	Lady Strange.
A. H. Layard, Esq.	H. Vaughan, Esq.
Capt. Leyland.	M. Digby Wyatt, Esq.

ART LIBRARY RETURN for the Years 1856 to 1860 inclusive.

1856.	1857.	1858.	1859.	1860.	
207	121	420	374	618	Subscribers.
5,346	3,455	7,178	6,364	7,981	Readers.
477	1,155	1,444	1,427	1,491	Books borrowed.
447	599	416	662	685	Diagrams, prints, &c. borrowed.
451	793	363	413	752	Volumes purchased.
44	204	126	122	119	" presented.
553	826	603	606	1,139	Parts, pamphlets, &c. purchased.
54	62	240	114	77	" presented.
39	809	305	189	132	Photographs purchased.
—	40	311	316	229	" presented.
—	425	15	15	121	Drawings purchased.
—	—	1	1	113	" presented.
—	1,859	4	222	199	Engravings purchased.
—	—	700	544	—	" presented.
—	43	2	6	77	Lithographs purchased.
—	—	—	—	13	" presented.
61	24	520	18	154	Prints, &c. mounted and restored.
561	488	516	407	975	Titles entered.
14	5	14	14	2	Catalogues of Library sold.
207	121	420	374	618	Fees.
436	291	204	349	373	Volumes bound.
—	—	604	11	1	Volumes lettered.
1856	Art Library open				- 168 days.
1857	"	"	-	-	- 113 "
1858	"	"	-	-	- 289 "
1859	"	"	-	-	- 225 "
1860	"	"	-	-	- 306 "

NUMBER of DAYS the ART LIBRARY has been open ; TOTAL NUMBER of VISITORS, and AVERAGE DAILY ATTENDANCE in each of the following YEARS.

Appendix L.
REPORT
OF MR.
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ON
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LECTIONS.

Year.	Number of Days open.	Total Number of Visitors.	Average Daily Attendance.	Subscribers.
1853	292	4,425	15	170
1854	248	7,942	32	235
1855	245	7,242	30	284
1856	168	5,346	32	207
1857	113	3,455	31	121
1858	289	7,178	28	420
1859	225	6,364	28	374
1860	306	7,981	26	613
Total (Jan. 1853 to Dec. 1860)		49,933		

(Signed) J. C. ROBINSON.

APPENDIX M.

Appendix M. REPORT of the OFFICIAL AGENT for GOVERNMENT PHOTOGRAPHS
REPORT OF OFFICIAL AGENT FOR PHOTO-GRAPHS, &c. and REPRODUCTIONS for the USE of SCHOOLS of ART and PUBLIC INSTRUCTION.

General Arrangements.

1. The arrangements indicated in the last Report (Appendix R., pp. 134, Seventh Report of the Science and Art Department) have been steadily carried out; but the supply of photographs has not been equal to the demand, owing chiefly to the unfavourable summer of 1860, for printing operations. In consequence of this it was thought desirable to suspend the receipt of all orders in November, in order to give an opportunity for clearing off the arrears which had accumulated. These arrears of orders now approach completion.

Photographs issued.

2. The number of photographs issued from the opening of the office in October 1859 to 31st December 1860, is 15,584, and the amount received for them *unmounted*, at the tariff prices stated in the last report, 87*l.* 10*s.*

British Museum Photographs.

3. In addition to the transfer of negatives for printing for the supply of the public upon the terms of the tariff fixed by the Department of Science and Art, a large stock of mounted and unmounted photographs belonging to the Trustees of the British Museum was delivered to this office for sale at the official prices with the additional charge of 8*d.* each when mounted. The sale of these from the commencement in May 1860 to 31st January 1861, to which date the accounts with the Trustees of the British Museum were made up, amounted to 108*l.* 14*s.* 7*d.* less the official agent's commission of 20 per cent.

4. A royalty of 20 per cent. amounting to 21*l.* 17*s.* 9*d.*, has also been paid to the Trustees of the British Museum upon the un-mounted photographs sold to 31st January 1861 printed from the *negatives* transferred for that purpose to the Department of Science and Art.

Public Exhibition of Official Photographs.

5. Owing to the want of space and the great demand for the photographs exhibited in the room set apart for that purpose, and described in the official price list, no further additions have been made to the various series last reported as arranged for public exhibition.

Electro-Metallic Reproductions, Fictile Ivories, and Casts.

6. Copies of the Art objects exhibited in the office have been supplied during the year to:—

1. The War Office for the Tower of London,
 2. The Museum of Irish Industry, Ireland,
 5. The Public Library, Melbourne, Victoria, Australia,
- and various private individuals for their collections.

Arundel Society.

Appendix M.

7. No transactions have taken place during the year on behalf of this society.

REPORT OF
OFFICIAL
AGENT FOR
PHOTO-
GRAPHS, &c.

Visitors.

8. The number of persons visiting the office for the inspection of the photographs, metallic reproductions, &c., during the year ending 31st December 1860 is as follows :—

January	-	-	-	-	1,758
February	-	-	-	-	1,865
March	-	-	-	-	1,691
April	-	-	-	-	2,291
May	-	-	-	-	2,004
June	-	-	-	-	1,864
July	-	-	-	-	1,160
August	-	-	-	-	2,178
September	-	-	-	-	2,236
October	-	-	-	-	2,187
November	-	-	-	-	1,568
December	-	-	-	-	1,431
Total	-	-	-	-	<u>22,933</u>

GEORGE WALLIS.

APPENDIX N.

Appendix N.

EDUCATIONAL COLLECTIONS.

MR. R. A.
THOMPSON'S
REPORT
ON EDUCA-
TIONAL
COLLEC-
TIONS.

I HAVE to report that satisfactory progress has been made in the educational collections during the past year. There has been a steady increase in the number of exhibitors, and a corresponding increase in the number and value of the donations and contributions. A new reading-room has been opened to the public, and a system of admission to it adopted, by quarterly, monthly, or weekly tickets, similar to that employed in the Art Library. The Educational Library was originally free to the public, but in consequence of the many inconveniences arising therefrom, it was found necessary to adopt a system of small payments for the privilege of studying in the reading-room; and the result has been, that though diminishing the number of visitors, it has nearly doubled the number of students and readers. The number of requisitions for permission to examine works in the collection during the year 1859 was 1,702, whilst in 1860 the number rose to 3,037.

Additions.

Many important additions have been made to the educational collection, the donations, and examples sent for exhibition being largely in excess of the contributions of the previous twelve months. The facilities offered by the Museum to schoolmasters and others engaged in teaching, for reference to educational works and apparatus, and especially in bringing immediately to their notice new publications and improvements in appliances for simplifying and rendering less irksome the methods of instruction both to the tutor and the public, has proved a great inducement to authors and publishers to send their productions, either as donations to the Museum or for exhibition therein; and it is to these two sources that the Educational Collection is mostly indebted to the large increase in the number of its examples, and consequent public utility.

Several important additions have been made to the examples of school fittings, showing great improvements in manufacture accompanied by cheapness of production; and, in the case of school desks and forms, tending materially to add to the comfort, health, and cleanliness of the pupils. The additions to the library are mostly included in Class 2, General Education, and consist of grammars, works on reading, writing, spelling, history, and works on foreign and the dead languages; these works are mostly intended for elementary instruction. In purchasing books for the library, endeavours have been made, with some success, to secure copies of the earliest editions of the standard works for elementary instruction, especially as regards writing slips and copies; the old copies being very superior to those now in general use. Amongst the additions to Class 3, Drawing and the Fine Arts, are numerous casts in plaster, reductions by machinery from the antique, rustic drawing-models, colours, and implements. Want of sufficient space renders the proper exhibition of the contributions to this class impossible. The number of works for purposes of instruction in both vocal and instrumental music has been very largely increased, most of the principal publishers of music having contributed specimens of their publications to the collection; a few musical instruments have also been exhibited; but want of space

precludes the extension of the class in this direction. In Class 4, Natural History, several small generic and elementary collections of shells, fossils, and minerals have been sent for exhibition, and various new works on classification and general natural history added to the library; some valuable donations of maps and atlases have been made to the class geography and astronomy.

Appendix N.
MR. R. A.
THOMPSON'S
REPORT
ON EDUCA-
TIONAL COL-
LECTIONS.

A collection of models, apparatus, and examples, suitable for use in Science and Navigation schools, has been formed, in accordance with the Science Minute of the Committee of Council on Education of the 23rd of March 1860; several hundred examples have been contributed, and the collection will be greatly increased as soon as suitable glass cases can be constructed for its reception. The apparatus and examples already received are intended to aid in the illustration and teaching of astronomy, navigation, chemistry, physics, and mechanics.

Upwards of 1,600 volumes have been added to the Library; of which number 1,136 have been presented, 462 purchased, and 98 sent for exhibition; whilst of models, maps, diagrams, and specimens of apparatus, 24 have been presented, 3 purchased, and 830 sent for exhibition; 495 volumes of books, models, and specimens of apparatus were withdrawn during the same period, but were mostly replaced by new editions of the books, and improved examples of the models and specimens of apparatus.

Arrangement.

For the better accommodation of persons desirous of making reference to the books in the Educational Museum, a reading room was prepared and opened to the public early in June, which, while greatly adding to the convenience and comfort of the visitors, has rendered the general supervision much more efficient and satisfactory.

All new publications received are placed on a table in the reading-room for the space of one month, previous to their being classified and placed in the book-cases.

Every specimen of apparatus, models, &c., added to the collection has been distinctly labelled, stating the name of the object, its use, price, and where it may be obtained, with the name of the inventor or producer.

Catalogue.

The fifth edition of the Catalogue was published early in the year, and the sixth edition, containing all the additions made to the collection up to the 31st of December last, placed in the hands of the printer.

An inventory of the collection, being a register of all examples received into the collection from its formation up to the present time, has been completed.

RICHARD A. THOMPSON.

Appendix N.

FOOD COLLECTION.

MR. R. A.
THOMPSON'S
REPORT ON
FOOD
DIVISION.

MANY interesting and instructive examples have been added to this collection, especially in the series and cases of the chemical analyses of various descriptions of food, and substances used for adulteration. The latter series of specimens attracted great attention, and has been much studied by the visitors to the Museum. The Food Collection still continues one of the most attractive portions of the Museum, being visited by a larger number of the public than most of the other collections.

Additions.

The following additions have been made during the past year: Donations, 211; specimens sent for exhibition, 54; purchases, 94; specimens prepared in the Museum, 116; total 475. Amongst the donations most worthy of notice are a collection of edible products of Honduras; a collection of the varieties of grouse indigenous to Nova Scotia; a series of specimens of the more distinct varieties of maize or Indian corn; and a collection of examples of the fruits, seeds, bread, and relics of the early inhabitants of Europe, from the Lacustrian habitations in the peat deposits of Roben Hausen, on the Lake of Pfefficon, Canton of Zurich, Switzerland. An interesting case of Sicilian confectionery, and various specimens of plants, fruits, and cereals, are included in those sent for exhibition.

Amongst the examples purchased are a case of pheasants illustrating the varieties that have been successfully introduced into this country; and a collection of fresh and salt water fish, being a selection of the ordinary varieties usually to be obtained in the London markets. An important addition has been made in a series of examples of substances commonly used for purposes of adulterating food; and when practicable the most simple way of detecting such adulteration either by chemical means or by the aid of the microscope is added.

Among the new cases of chemical analysis and preparations, is one illustrating the manufacture of bread from wheaten flour by various processes; showing the quantities of materials used in producing a four-pound loaf by the different systems of manufacture; analyses of eggs, fish, artichokes, yams, figs, pears, tobacco, and other substances have been prepared in the Museum, and exhibited in the collection.

No alteration in the plan of arrangement has been made since last year, though in consequence of the want of space for the Food Collection it has not been found practicable to adhere strictly to the system of classification adopted.

1,376 descriptive labels have been prepared and attached to the specimens; and 50 analytical and descriptive labels have been printed and copies distributed amongst various provincial museums.

A new edition of the Guide, containing many additions, has been published, and a register of the specimens received into the collection completed.

RICHARD A. THOMPSON.

REPORT of the KEEPER of the DIVISION of ANIMAL PRODUCTS in the SOUTH KENSINGTON MUSEUM. Appendix N.

MR. R. A.
THOMPSON'S
REPORT ON
ANIMAL
PRODUCTS
DIVISION.

DURING the past year but little progress has been made towards increasing the collection of Animal Products, or further developing the branches of manufacture already partially illustrated, want of room rendering any great increase at present absolutely impossible. There would be little difficulty in augmenting this collection to almost any extent, provided the necessary space could be found for its reception.

In some few cases the old specimens have been removed to make place for those of more recent manufacture.

388 specimens have been added to the collection, of which number 125 have been presented, and 263 sent for exhibition. Amongst the examples presented are a valuable series illustrating the weaving and dyeing of carpets, a series of merino wools, and a case of specimens showing the use of old and waste materials in producing mungo and shoddy for manufacture into inferior kinds of woollen cloth.

Amongst the most worthy of attention of those sent for exhibition, are a case of specimens illustrating the Leeds woollen cloth manufactures, the manufacture of silk hats, the manufacture of whips and harness, and a valuable collection of raw and manufactured coral. A few heads and fleeces of rare varieties of sheep have also been added to the collection.

300 new descriptive labels have been prepared, printed, and attached to the examples: nearly every specimen in the Animal Product collection is now labelled.

A new edition of the catalogue, containing descriptions of all the articles presented or sent for exhibition, was published early in the year; and an inventory of the collection, being a register of all the examples received into the Museum, and the withdrawals therefrom up to this date, completed. Only two contributors withdrew their exhibits during the past year, and one of the series thus withdrawn has since been replaced by a finer and more extensive collection.

The collection generally is in good condition, though some of the sections require renewing, on account of their having become faded and otherwise deteriorated from long exposure, many of them forming part of the collection presented to the Commissioners for the Exhibition of 1851, and though interesting in themselves, and for comparison with more recent examples, yet they do not represent the present state of our manufactures, especially in the important classes of silk and woollen. To protect the valuable collection of furs and skins it has been found necessary to provide glass cases, and suitable glass cases are now being made for this purpose.

RICHARD A. THOMPSON.

APPENDIX O.

Appendix O. REPORT of the SUPERINTENDENT of the FOOD and ANIMAL COLLECTION.

REPORT
OF DR.
LANKESTER
ON FOOD
AND
ANIMAL
COLLEC-
TIONS.

SIR,

I BEG to lay before you the following Report of the work done under my superintendence in the Animal and Food Collections during the past year.

Although much has been done to render the collections more complete, the want of more space is a great barrier to that development which would render these collections as useful as they might be, and commensurate with their educational and technological value. The want of accommodation for the preparation and production of specimens is much felt. I hope, however, that as increased accommodation will be given to the specimens in the Museum by the buildings now in course of construction, that a larger amount of space will be allowed to the important department placed under my superintendence.

LECTURES.

During the past year my attention has been drawn to the best means of rendering the collections under my care available for public instruction and improvement. With this object in view I applied to the Committee of Council on Education for permission to continue my lectures on the Food Collection, and to initiate the course on the Animal Product Collections. With their permission I gave twelve lectures on the Food Collections, and six lectures on the Animal Product Collections. These lectures, especially those given in the evenings, were well attended, and as a charge was made for admission, it was a good indication of the anxiety of the public to obtain this kind of instruction. This is not to be wondered at, for up to the time these lectures were given, there were no lectures in London, with the exception of the lectures to working men delivered at the School of Mines in Jermyn Street, that contemplated giving to the working classes of London, at an hour at which they could attend, systematic instruction on any branch of natural knowledge. Unless accompanied with oral instruction of a systematic nature, our great collections of science and art can never be so effectual a means of instructing or elevating the public mind as they might be. As well might we expect children to be taught in a school without a master, however well supplied with books, paper, and pens and ink, as that our museums should be of educational value independent of oral systematic teaching. There are few students who, by their own unassisted energy, can find their way to improvement without guidance or direction.

The twelve lectures on food were as follows:—First course,—1, on water; 2, on salt; 3, on starch and sugar; 4, on oil, butter, and suet; 5, on flesh-forming foods; 6, on animal food. Second course—1, on salt; 2, on oil, butter, and fat; 3, on animal food; 4, on animals used as food by man; 5, on condiments and spices; 6, on the adulteration of food.

The Animal Product Collection offered a good basis for a series of lectures on the technology of the animal kingdom. These lectures were delivered on Tuesday evenings, and at the same charge as the lectures on food. Though the subject was not so generally interesting as that of

food, they were well attended. I have since been requested to deliver the same lectures in other places, affording gratifying proof that there exists a desire for further knowledge on these subjects. There is, perhaps, no subject in which the whole country is more immediately interested than in the application of scientific principles to the preparation and economical employment in the arts of life of the products of the mineral, vegetable, and animal kingdoms. The subjects selected for the first course of six lectures were as follows:—1, on silk; 2, on wool; 3, on leather; 4, on bone; 5, on soap; 6, on the utilisation of waste.

Appendix C.
REPORT
OF DR.
LANKESTER
ON FOOD
AND
ANIMAL
COLLEC-
TIONS.

ANIMAL PRODUCT COLLECTION.

My attention has been drawn to the Animal Product Museum for the purpose of ascertaining whether any of the older specimens might be withdrawn and newer ones added. Although some of the manufactured articles are old, yet they afford a means of indicating the history of the improvements made from time to time in the quantity and character of the articles manufactured, and I have accordingly recommended that new specimens should not displace the old, even at the hazard of considerable crowding. In this way room has been made for several important additions to the Animal Product Collection. In the wool department a large number of new specimens of cloth, carpeting, and felt have been added, with cases illustrating the manufacture of cloth and carpets. Additions have also been made to the silk, the leather, the skin, and the invertebrate animal department, the details of which will be found in the report of Mr. Richard Thompson, the Keeper of the Animal Product Collection.

Having seen the advantage of furnishing information by means of large printed labels as carried out in the Food Collection, I have written several labels for the Animal Product Collection of the same kind, and propose following this out with regard to the several departments represented in the collection. I have also, during the past year, been engaged in making notes in the Animal Product Collection with a view to the preparation of the third edition of the catalogue of that collection, which will be required to be ready by the end of the year 1861. As the result of this examination I find that many important departments of manufacture that are dependent on animal substances for their raw material are not so fully represented as they might be, if more space could be secured for their exhibition. This objection is also often urged by exhibitors as a reason for not sending their manufactured products to the Museum.

FOOD COLLECTION.

During the past year this collection has had the principal share of my attention. By exhibiting a large number of the specimens in bottles, which were formerly placed in trays and cases, a considerable space has been gained for the increase of specimens having more educational value. At the same time it would be very desirable that many of the removed specimens should be returned to the cases when space can be afforded for them. It is found, practically, that specimens exhibited upon a flat surface produce more impression upon the senses, and a more distinct idea is gained of quantity and quality than when they are enclosed in round glass bottles of various sizes. It is also very important where teaching is the aim of the exhibition of specimens that they should be so far separated from each other, that the attention may be wholly given to the object looked at without the interference of surrounding objects.

Appendix O.

LABELS.

REPORT
OF DR.
LANKESTER
ON FOOD
AND
ANIMAL
COLLEC-
TIONS.

In pursuance of the plan on which the Food Collection was started, I have prepared labels of various sizes according to the importance of the object to be exhibited in the Museum. Considerable delay was at first experienced in getting these labels printed. New arrangements having been made to facilitate my labours in this department, I have to report that the following labels have been printed during the past year:—

Mineral Food.

Tests for the purity of water.	Water in solid food.
Water.	Salt.

Heat-giving Food.

Acids.	Yam.
Oleaginous food.	Pears.
Vinegar plant.	Grapes.
Honey.	Jerusalem artichoke.
Figs.	Sweet potatoes.

*Flesh-forming Food.**a. Vegetable.*

Barley.	Oats.
Bread.	Cabbages.
Maize.	

b. Animal.

Birds used as food.	Reptiles used as food.
Composition of fish.	The pheasant.
Eggs.	Crustacea used as food.
Fish used as food.	Mackerel.
Flesh used as food.	Pike.
Hens' eggs.	The sturgeon.
Insects used as food.	Haddock.
Mollusca used as food.	Eels.
Mammals used as food.	...

*Accessory Food.**Accessory Food.**Auxiliary Food.*

Composition of wines.	Tobacco.
Wines.	Composition of Tobacco.

*General.**Chinese Food.*

Many of the above labels have been written to accompany the exhibition of new analyses of foods not before exhibited. The labels, wheat, oats, potato, rice, and barley, have been rewritten to accompany new analyses of these substances, which it was thought desirable to exhibit in order to assimilate the quantitative analyses of these important articles of food with those made for the other substances exhibited in the collection.

ANALYSES OF FOOD.

Appendix O.

REPORT
OF DR.
LANKESTER
ON FOOD
AND
ANIMAL
COLLEC-
TIONS.

One of the great objects of the Food Collection being the representation to the eye of the various substances entering into the composition of food, I have added during the past year the analyses of several articles of food to those already in the Museum. These analyses are chiefly founded on those made by distinguished chemists in this country, and on the continent of Europe. The calculations of quantities are, however, in all cases my own. I have also when several analyses of the same substance have been published preferred, where chemists of equal eminence have differed in the results of their investigations, to take the average result of their calculations than to exhibit the analysis of one only, however eminent. I have in a few cases been guided by the result of my own chemical investigations, but my exertions are limited in this direction for the want of some fitting place in the Museum in which to carry on the analysis or preparation of specimens.

The new cases containing analyses of food which have been added to the collection during the past year are as follows:—

Vegetable Food.

Composition of fermented and unfermented bread.
Composition of one pound of Jerusalem artichokes.
Composition of one pound of greens.
Composition of one pound of potatoes.
Composition of one pound of wheat.
Composition of one pound of barley.
Composition of one pound of oats.
Composition of one pound of rice.
Composition of one pound of ripe pears.
Composition of one pound of ripe grapes.
Composition of one pound of cabbages.
Composition of one pound of dried figs.

Animal Food.

Composition of one pound of hens' eggs.
Composition of one pound of mackerel.
Composition of one pound of soles.
Composition of one pound of herrings.
Composition of one pound of common barn-door fowl.
Composition of one pound of lamb.

Amongst the auxiliary foods, the composition of one pound of tobacco has been exhibited.

EXHIBITION OF SPECIMENS.

The Keeper will report on the addition to the specimens during the past year; the following have been exhibited at my request or under my direction.

Water.—A series of specimens of water, exhibiting the action of water on lead has been added to the collection. The practice of stowing water in leaden cisterns is very likely to lead to injurious results, and the public is not generally acquainted with the circumstances under which water acts on lead; hence I have directed several specimens of water with lead in them to be exhibited to show the action of water on lead. Another series of waters have been exhibited for the purpose of showing the action of the permanganate of potash, in indicating the organic matters contained in water. As these matters are those which produce disease, it becomes a question of the greatest importance to supply a test for the existence of those substances which can be readily applied and easily understood. In

Appendix O. supplying water to soldiers in camps and sailors on board ships, such a test is a matter of first importance.

REPORT
OF DR.
LANKESTER
ON FOOD
AND
ANIMAL
COLLEC-
TIONS.

Wax Models.—Some of the specimens of food, both from the vegetable and animal kingdoms are very perishable, and cannot be conveniently kept in any fluid. Of these I have thought it desirable to have models in wax made. Models of edible fungi, of various forms of animal food, and of fruits, have thus been represented in the collection.

Animals used as Food.—It seems very desirable to exhibit those forms of domesticated and wild animals of Great Britain which furnish the best and most economical forms of food. With this view I have selected a number of fish which have been exhibited in a dry form, and exhibited in cases with appropriate labels. Through the exertions of Mr. Gould, I have been enabled to procure for exhibition the three species of pheasant found in the preserves of Great Britain. The introduction of the *Phasianus torquatus* from China, and the *Phasianus versicolor* from Japan, has been the means of greatly improving the breed of pheasants in this country. It is impossible, however, to represent the whole body of the larger mammalia used as food, and in the case of these animals I have recommended that the heads alone should be exhibited. Several specimens of the native breeds of oxen in this country are now exhibited, and I hope the development of this department will be found interesting to the farmer and grazier as well as to the public at large.

ADULTERATION OF FOOD.

The passing of the Act for the Prevention of the Adulteration of Food during the last Session of Parliament having awakened considerable anxiety in the public mind on this subject, I have been anxious to develop this department of the Food Collection as far as possible. The detection of adulteration in food frequently demands the greatest amount of analytical skill in the use of the microscope and chemical re-agents. At the same time there is a certain amount of obvious adulterations which a small amount of knowledge on the part of the public might enable them to detect. To these I have drawn attention by directing to be prepared a series of specimens illustrating the appearance of adulterated articles of food as compared with those that are genuine, and likewise the means of detecting the adulteration. In this way the adulteration of food with copper, red lead, chalk, and other substances is illustrated. The adulteration to which milk, vinegar, confectionery, pickles, and other foods are subjected, are likewise demonstrated as far as the means at my disposal would permit.

DIAGRAMS.

Several new diagrams have been added for the purpose more particularly of showing the nature of adulterations which can be detected by the use of the microscope, as coffee, milk, &c.

GUIDE TO THE FOOD MUSEUM.

Another edition of the guide to the Food Museum having been called for, I have, at the request of the Committee of Council, prepared a third edition for the press. A considerable quantity of new matter was added to this edition with all the new labels which had been written since the last edition. It also contains an index and chapter of contents to facilitate the work of reference. By printing a larger number of this edition than of the two first, the price has been kept down to sixpence, thus enabling a larger number of the community to obtain it and derive the advantages which a study of the nature and composition of their daily food cannot fail to confer.

(Signed) EDWIN LANKESTER.

APPENDIX P.

REPORT of the SUPERINTENDENT of the MUSEUM OF CONSTRUCTION.

Appendix P.

REPORT
ON THE
MUSEUM
OF CON-
STRUCTION.

Additions.

DURING the past year the Museum of Construction and Building Materials has been largely augmented, in the number and variety of the objects contained in it.

Upwards of 800 specimens of building materials have been added to the collection by 52 contributors. Of these six are donors to the Museum, and the remainder are, for the most part, manufacturers of the articles contributed who have sent specimens of their manufacture for exhibition, with the view of bringing them more directly before public notice.

A few examples have been purchased by the Department for the collection. They illustrate special applications of material and design.

Under this head (purchase) may be mentioned :—

A reproduction, by Messrs. Minton & Co., of a large vase, in enamelled ware, designed by Baron Marochetti.

Two designs in enamelled ware for public drinking fountains copied from Italian originals in the Art Museum.

A collection of ornamental encaustic flooring tiles, and glazed and enamelled wall tiles, also by Messrs. Minton & Co., Stoke-on-Trent.

A large bust in terra cotta by Mr. J. M. Blashfield of Stamford.

Amongst the donors to the Museum are :—

The Marquis of Salisbury.

Sir J. F. Burgoyne, Inspector-General of Fortifications.

F. Matheson Esq., of Her Majesty's Office of Works at Edinburgh.

The Marquis of Salisbury has presented to the collection a valuable series of some 280 pieces of moulded bricks and blocks forming an ornamental garden palisade. Sir J. F. Burgoyne contributes specimens of wood, from the Gold Coast, Africa, which are employed in the Government buildings in that colony. Mr. Matheson contributes a valuable drawing of the roof over the Old Parliament House at Edinburgh.

Specimens of the moulded bricks and lumps, which have been used in the construction of the Arcades in the new gardens of the Royal Horticultural Society at South Kensington, are also contributed.

The following amongst the many articles sent for exhibition by manufacturers and others, deserve mention :—

Specimens of flooring tiles, and tiles in majolica ware, for wall decorations, by Messrs. Minton & Co., Stoke-on-Trent.

Flooring tiles, exhibited by Messrs. Maw & Co., Benthall, Salop; the Architectural Pottery Company, Poole, Dorset; which firms have also laid down as flooring in the Museum, a large piece of ornamental tile pavement.

Appendix P.
REPORT
ON THE
MUSEUM
OF CON-
STRUCTION.

The collections of building and other bricks and blocks, exhibited by Messrs. J. & W. Eastwood, Lambeth; Messrs. F. & G. Rosher & Co., Blackfriars; Lewis Tomson, Wisbeach; and J. Arnold, Tamworth.

A specimen of General O. H. Knapp's iron pavement, for street ways, &c.; which has been laid with much success, in King Street, Westminster.

The marblé chimney pieces shown by J. Mitchell, Walton Street, Brompton.

The series of fire-lump grates and stoves, by W. Pierce, Jermyn Street, Regent Street.

Illustrations of the application of terra cotta as a substitute for stone or cement work in the external decoration of buildings, forms a considerable portion of the Museum.

This material is also much employed in the manufacture of vases, figures, statues, and similar ornamental objects. M. H. Blanchard & Co., Blackfriars; Messrs. J. M. Blashfield, Stamford; J. Pulham, Broxbourne; Gibbs & Canning, Tamworth, are the principal exhibitors.

Some illustrations of the terra cotta columns, used in a portion of the arcading in the Royal Horticultural Society's Gardens, are also exhibited. They were executed by Messrs. M. H. Blanchard & Co., Blackfriars Road, from designs by Godfrey Sykes, Esq., Science and Art Department.

Glass, as applied to various purposes in buildings, forms a new feature in the Museum. Samples and specimens of roofing tiles and slates of glass, area lights, coal-hole lights, and window-glass of all descriptions; are well illustrated.

Paper-hangings, and similar wall decorations, are also exhibited for the first time in this division, by several of the principal metropolitan manufacturers.

Models and full size illustrations of appliances for ventilation and other useful purposes in building and construction have also been contributed for exhibition.

A model of the principal staircase in Dorchester House, Park Lane, lent by the architect, Lewis Vulliamy, Esq.; a model of a patent system for trussing wooden girders with cast-iron, lent by the inventor, J. Coombes, Esq., C.E.; a model of a double-way staircase, lent by G. A. Burn, Esq.; a model of the roof over a chapel at Highgate, lent by the architect, T. Roger Smith, Esq.; a drawing of a temporary church built at Holloway, lent by Geo. Truefitt, Esq., the architect; a model of a patent hoist or lift for builders' use in hoisting bricks and materials, exhibited by Mr. George Johnson, builder, Wandsworth, the inventor; and several other similar illustrations, form valuable additions to the Museum.

Arrangement.

The Museum was entirely re-arranged in the early part of the past year. As far as possible the various objects have been brought together, and classed; so that, each variety of any particular article may be readily seen, and afford opportunity for judging of improvements, and of the intentions and uses of the illustrations. This classification has rendered the Museum of much value to architects, builders, and others, from whom frequent inquiries are received, for various building contrivances.

Catalogue.

Appendix P.

A new and illustrated catalogue of the Museum has been issued. It is so arranged that by means of a classed index, reference can be readily made for any particular object; and an alphabetical list of the exhibitors being also appended, it is believed that the object, or the exhibitor, may be found with the least possible difficulty.

462 copies of the first edition of the catalogue were sold during the year, at the sale-stall in the Museum. The sale of the new edition of the book still continues satisfactory.

Labelling.

493 labels were written for, and affixed to, the various articles exhibited in the Museum. The whole collection has also been re-numbered, so as to agree with the numbers in the different sections of the new edition of the catalogue.

Inventory.

An inventory of the Museum has been completed. It exhibits the number of the several articles in the collection. The section and number in the catalogue to which they belong, and by whom contributed.

The number of the illustrations, registered exceeds 5,000.

In concluding this report, it would appear desirable to mention the increasing demand from manufacturers of building materials and contrivances, for space, to exhibit in the Museum, specimens and illustrations.

These applications come from provincial as well as metropolitan producers; and it would be of importance to the Museum, if its present area could be extended, so as to provide suitable space for exhibiting many useful and desirable objects, which still remain unrepresented.

The contributions of the past year have almost exhausted the space now occupied by the collection, and considering the practical use made of the Museum, it would seem of moment, that every description of information which is here sought for, should be generally illustrated.

Hitherto this object has been accomplished as far as possible, and every means taken to provide any desirable illustration.

Without additional space however, for exhibiting, many valuable articles used in building and construction must remain unrepresented; and the Museum will comparatively be incapable of competing with the various and increasing demands now made upon it.

FRANCIS FOWKE, Capt. R.E.

April 1861.

Appendix Q.
COMPARATIVE
FINANCIAL
STATEMENT.

APPENDIX Q.

COMPARATIVE YEARLY FINANCIAL STATEMENT.—Receipts repayable to Exchequer.

	1857. From 22nd June.			1858.			1859.			1860.		
	—	—	Receipts.	—	—	Receipts.	—	—	Receipts.	—	—	Receipts.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Admissions to the Museum,—												
1. By payment of 6d.	13,211			30,107			29,982			53,116		
Morning	4,068			4,459			4,198			7,883		
Evening												
Total	17,279	431 5 4		34,566	864 3 0		34,180	853 5 0		63,970	1,599 9 6	
2. By periodical tickets.												
School, 1s.	—	—	—	13	13 0 0	—	7	7 0 0	—	5	5 0 0	—
Annual, 10s.	14	7 0 0	7 0 0	9	4 10 0	—	5	2 10 0	—	11	5 10 0	—
6 months, 5s.	—	—	—	2	0 12 0	—	2	0 12 0	—	14	4 4 0	—
3 months, 3s.	—	—	—	54	8 2 0	—	36	5 8 0	—	72	10 16 0	—
1 month, 2s.	—	—	—	26	2 12 0	—	25	2 10 0	—	26	2 12 0	—
Sale of catalogues	—	—	—	—	—	28 16 0	—	—	18 0 0	—	—	28 2 0
Sale of lecture tickets	—	—	91 3 7	—	181 13 2	—	—	—	108 1 6	—	—	260 6 8
Refreshment rooms	—	—	19 6 0	—	65 12 6	—	—	—	72 15 6	—	—	30 7 9
Waiting rooms	—	—	18 18 9	—	50 14 9	—	—	—	42 12 1½	—	—	43 8 10
Private societies	—	—	12 16 1	—	17 1 10	—	—	—	13 15 6	—	—	21 13 6
Private societies	—	—	—	—	23 0 0	—	—	—	13 0 0	—	—	42 12 3
Sale of library tickets:—												
Weekly, 6d.	87	2 3 6	—	313	7 16 0	—	253	7 6 6	—	552	13 16 0	—
Monthly, 1s. 6d.	29	2 3 6	—	93	6 19 6	—	72	5 8 0	—	130	9 15 0	—
Yearly, 10s.	5	2 10 0	6 17 0	15	7 10 0	22 5 6	9	4 10 0	17 4 6	21	10 10 0	34 1 0
General total	—	—	587 6 9	—	—	1,255 6 9	—	—	1,198 14 1½	—	—	2,000 1 6

NOTE.—On the 22nd October 1860, periodical tickets of admission to the Museum, including Art Library and Educational Reading Room, were issued at the following rates—weekly, 6d.; monthly, 1s. 6d.; quarterly, 3s.; half-yearly, 6s.; yearly, 10s.

PHILIP CUNLIFFE OWEN, Deputy General Superintendent.

Average Number of Visitors in each Year. 143

TABLE of AVERAGE NUMBERS of VISITORS in each YEAR, for Days, Evenings, Weeks, and Months:

Appendix Q.
AVERAGE
NUMBER OF
VISITORS.

MORNING and EVENING AVERAGES.								
	1857. From 22nd June.		1858.		1859.		1860.	
	Average on each Day.	Average of the Morning and Evening.	Average on each Day.	Average of the Morning and Evening.	Average on each Day.	Average of the Morning and Evening.	Average on each Day.	Average of the Morning and Evening.
Three free days in each week.								
Monday :								
Morning -	1,264		1,402		1,389		1,892	
Evening -	3,097		2,157		1,989		2,347	
Total -		4,250		3,559		3,378		4,239
Tuesday :								
Morning -	1,115		1,118		1,252		1,606	
Evening -	2,151		1,051		1,579		2,199	
Total -		2,990		2,769		2,831		3,805
Saturday :								
Morning -	1,302		1,124		1,419		1,538	
Total -		1,302		1,124		1,419		1,538
Threestudents' days and one students' evening.								
Wednesday :								
Morning,								
Paying -	226		208		217		368	
Passes -	61		130		133		254	
Total -		267		326		333		622
Evening,								
Paying -	129		91		87		151	
Passes -	63		130		136		188	
Total -		187		216		217		339
Thursday :								
Morning,								
Paying -	206		215		225		395	
Passes -	70		91		111		160	
Total -		264		293		319		535
Friday :								
Morning,								
Paying -	184		196		185		335	
Passes -	18		139		150		153	
Total -		201		322		327		488

WEEKLY STATEMENT.

Free days.								
Morning -	3,594		3,738		4,275		5,299	
Evening -	4,957		3,807		3,754		4,680	
Total -		8,551		7,605		8,029		9,979
Students' days.								
Morning,								
Paying -	580		614		624		1,195	
Passes -	142		182		195		304	
Total -		705		784		803		1,499
Weekly Total		9,582		8,609		9,091		11,744

MONTHLY STATEMENT.

Morning -	18,393		19,773		21,024		28,966	
Evening -	23,237		18,251		17,090		21,925	
Total -		41,630		33,024		39,614		50,891

NOTE.—Since the 28th May 1860, the Museum has been opened from 10 a.m. till 10 p.m. on the first three days of the week.

PHILIP CUNLIFFE OWEN,
Deputy General Superintendent.

Appendix Q.
COMPARATIVE
STATEMENT
OF VISITORS.

SOUTH KENSINGTON MUSEUM.—COMPARATIVE YEARLY STATEMENT OF VISITORS.

MONTHS.	1857 (from 22nd June).						1858.						1859.						1860.							
	Free Days.			Students' Days.			Free Days.			Students' Days.			Free Days.			Students' Days.			Free Days.			Students' Days.				
	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.	Morn.	Even.	TOTAL.		
January -	-	-	-	-	-	-	15,638	13,314	2,811	863	32,631	21,180	18,142	2,188	970	42,480	26,216	24,081	5,131	1,907	58,345	26,216	24,081	5,131	1,907	58,345
February -	-	-	-	-	-	-	13,123	13,976	3,651	898	31,623	16,093	16,068	2,401	701	35,923	18,716	17,814	5,794	3,080	45,354	18,716	17,814	5,794	3,080	45,354
March -	-	-	-	-	-	-	15,467	19,108	3,483	1,258	39,374	17,675	14,680	3,172	878	30,403	21,234	18,010	6,101	1,946	47,951	21,234	18,010	6,101	1,946	47,951
April -	-	-	-	-	-	-	23,482	18,921	4,127	497	47,027	20,299	14,496	6,195	3,598	41,588	33,424	29,000	4,466	594	64,544	33,424	29,000	4,466	594	64,544
May -	-	-	-	-	-	-	25,463	19,985	3,950	467	49,865	18,057	19,467	4,025	3,396	44,885	25,767	24,827	6,997	888	58,149	25,767	24,827	6,997	888	58,149
June -	10,016	8,493	-	-	-	18,511	12,093	14,645	3,595	597	30,932	19,574	12,336	3,876	395	36,181	21,505	16,745	8,601	2,231	49,082	21,505	16,745	8,601	2,231	49,082
July -	19,287	21,123	4,637	1,693	-	46,752	16,741	15,048	4,088	1,436	37,813	13,863	11,763	3,410	1,879	30,917	23,704	21,920	7,391	673	53,691	23,704	21,920	7,391	673	53,691
August -	16,617	20,530	2,205	640	-	45,992	15,873	23,213	2,676	382	42,141	18,208	18,523	3,207	701	40,611	21,056	17,951	7,103	821	46,931	21,056	17,951	7,103	821	46,931
September	14,758	29,262	2,083	681	-	46,784	15,557	22,414	3,218	595	41,734	17,945	16,701	3,133	449	38,251	24,626	21,173	5,493	659	51,951	24,626	21,173	5,493	659	51,951
October -	14,504	21,206	2,007	526	-	38,303	14,709	16,080	2,757	541	34,080	17,545	18,996	2,933	536	40,080	25,090	27,569	5,072	1,005	59,336	25,090	27,569	5,072	1,005	59,336
November	11,039	19,399	1,650	526	-	32,614	11,593	16,461	1,697	262	30,013	13,904	16,532	3,238	886	33,660	13,066	15,801	5,185	1,119	36,071	13,066	15,801	5,185	1,119	36,071
December	19,449	17,374	2,059	453	-	39,335	19,740	16,502	1,758	987	38,987	23,043	14,802	7,872	5,677	51,406	21,199	14,274	3,046	772	39,291	21,199	14,274	3,046	772	39,291
Totals -	105,670	143,399	14,701	4,521	-	268,291	199,481	209,725	37,791	9,291	456,298	217,396	192,111	43,692	20,166	475,305	276,503	247,425	71,093	15,673	610,696	276,503	247,425	71,093	15,673	610,696

NOTE.—Since the 28th May 1860, the Museum has been opened from 10 a.m. till 10 p.m. on the first three days of the week.

PHILIP CONLIFFE OWEN, Deputy General Superintendent.

APPENDIX R.

Appendix R.

LECTURES
AT SOUTH
KENSING-
TON.

LECTURES delivered in the THEATRE AT SOUTH KENSINGTON.

THE following courses have been delivered during 1860 and the commencement of 1861 :—

1. Six lectures on Food, by Dr. Lankester, M.D., F.R.S., on Wednesday evenings, from 18th January to 21st March 1860, at eight o'clock. Tickets of admission to the course 1s., reserved seats for the course 5s., single lecture 6d.; each lecture was attended by an average of 284 persons.

2. First series of six lectures on Science Instruction on Monday evenings, principally addressed to teachers, on the best method of acquiring and communicating knowledge in the following branches of Science in which certificates are given under the Science Minute of the 2nd June 1859. The statistics of attendance are given in a note.

Science Lectures—as follows :—

Lecture I. 16th April 1860.—“ Practical Plane and Descriptive Geometry, and their Application to Mechanical and Machine Drawing and Practical Architecture.” By Professor Bradley.

Lecture II. 23rd April.—“ Mechanical Physics.” By Rev. B. M. Cowie, M.A., H.M. Inspector of Schools.

Lecture III. 30th April.—“ Experimental Physics.” By Professor Tyndall, F.R.S.

Lecture IV. 7th May.—“ Geology and Mineralogy.” By Professor W. W. Smyth, F.R.S.

Lecture V. 14th May.—“ Zoology.” By Professor Huxley, F.R.S.

Lecture VI. 21st May.—“ Botany.” By Dr. Lankester, M.D., F.R.S.

Teachers admitted on payment of 6d. each, for the course or 1s. each lecture. Reserved seats for the course 5s.

3. Second series of five lectures on Science instruction, on Monday evenings principally addressed to teachers, on the best Method of acquiring and communicating knowledge in the following branches of Science in which certificates are given under the Science Minute of the 2nd June 1859. The statistics are given in a note.

Science Lectures as follows :—

Lecture I. 7th January 1861.—“ Chemistry.” By Professor Hofmann, F.R.S.

Lecture II. 14th January.—“ Geology.” By Professor Ramsay, F.R.S.

Lecture III. 21st January.—“ Physical Geography.” By Dr. Kinkel, F.R.G.S.

Lecture IV. 28th January.—“ Navigation and Nautical Astronomy.” By J. Riddle, F.R.A.S.

Lecture V. 4th February.—“ The Promotion of Scientific Instruction by the Science and Art Department, the Nature and Amount of Aid afforded, &c.” By Captain Donnelly, R.E., Inspector for Science.

Teachers admitted on payment of 6d. each for the course, or 1s. each lecture. Reserved seats for the course, 5s.

Appendix B.
LECTURES
AT SOUTH
KENSING-
TON.

4. Fourteen lectures on Botany, by Dr. Dresser, Ph. D. (Jena), on Wednesday afternoons, from 16th November 1859 to 22nd February 1860. Masters in training and registered students of the Department admitted free. Tickets of admission to schoolmasters, schoolmistresses, and pupil-teachers 1s. for the course; to the public, 2s. 6d. the course, or 6d. each lecture. Each lecture was attended by an average of 44 persons.

5. Six lectures on the Animal Product Collections of the Museum, by Dr. Lankester, M.D., F.R.S., on Tuesday evenings, from 10th April to 15th May 1860, at eight o'clock. Tickets of admission to the course, 1s.; reserved seats for the course, 2s. 6d.; single lecture, 6d. Each lecture was attended by an average of 170 persons.

6. Twelve lectures on the Human Form by John Marshall, Esq., F.R.S., F.R.C.S., Surgeon to University College Hospitals on Friday afternoons, from 20th April to 6th July 1860, at four o'clock. Masters and mistresses in training, and registered students of the Department, admitted free. Tickets of admission for the course, 6s.; single lecture, 1s. Each lecture was attended by an average of 42 persons.

7. Six lectures on Food by Dr. Lankester, M.D., F.R.S., on Saturday afternoons, from 5th May to 9th June 1860, at four o'clock. Tickets of admission to the course, 2s.; reserved seats for the course, 5s.; single lecture, 1s. Each lecture was attended by an average of 55 persons.

8. Twelve lectures on the Human Form, by John Marshall, Esq., F.R.S., F.R.C.S., Surgeon to University College Hospital, on Friday evenings, from 2nd November 1860 to 25th January 1861, at eight o'clock. Masters in training and registered students of the Department admitted free. Tickets of admission to the course 6s.; single lecture, 6d. Each lecture was attended by an average of 83 persons.

9. Thirty-two lectures on the Elements and Principles of Ornament, by Octavius Hudson on Mondays.

Thirty-two lectures on Historic Styles on Tuesdays. Masters in training and registered students of the Department admitted free.

Attendance at Lectures delivered at South Kensington. 147

SOUTH KENSINGTON MUSEUM.

ATTENDANCE at a SERIES of LECTURES on Science Instruction, January and February 1861.

School or College.	Address.	School- master.	School- mistress.	Pupil-Teachers.		Students.		Total.
				Male.	Female.	Male.	Female.	
Aldersgate Schools	160, Aldersgate Street, E.C.	1						1
All Saints' National School	Church Street, Fulham	1						4
Archdeacon's Cambridge's School	Twickenham	1						1
Birkbeck School	Bethnal Green	1						1
"	Chancery Lane	1						1
"	Kingsland	1						2
Boys' Home Reformatory School	Wandsworth	2						2
Boys' Model School	Borough Road	2						2
British School	Brentford	1						2
"	George Street, Lambeth	1						2
"	South Islington	1						1
"	White Cross Place, Finsbury	1						1
Camden National School	Commercial Road, Peckham	1						1
Christ Church British School	23, Lambeth Terrace, Lambeth Road	1						1
Christ Church Infant School	Meadow Cottage, Uxbridge Road	1						1
Collegiate and Commercial School	Milton House, Cassland Road	1						1
Commercial and Scientific School	15, Lower Phillimore Place	1						1
Curzon School	29, Trevor Square	1						2
Ebury Street School	67, Upper Ebury Street	1						1
Forty Hill National School	Enfield	1						2
Fox and Knot Court School	Kwig Street, Smithfield	1						2
Girls' Collegiate School	35, Bedford Street, Lixerpool	1						1
Globe House Academy	1, Mile-end Terrace, Mile-end Road	1						1
Grove British School	Battersea	1						1
Highbury Training College	Highbury	1						1
Home and Colonial Schools	Gray's Inn Road	1						4
Industrial Schools	Forest Lane, Stratford	1						1
"	Mile-end, Old Town	1						1
"	Somer's Town, N.W.	1						1
Middlesex Street Schools	Carried forward	27	6	4	1	4		42

Appendix 1

ATTENDANCE AT LECTURES AT SOUTH KENSINGTON.

Appendix R:

ATTEND-
ANCE AT
LECTURES
AT SOUTH
KENSING-
TON.ATTENDANCE at a SERIES of LECTURES on Science Instruction—*cont.*

School or College.	Address.	School- master, mistress.	Pupil-teachers.		Students.		Total.
			Male.	Female.	Male.	Female.	
Mission School	Nova Scotia Gardens, Bethnal Green	27	4	1	4	—	42
National School	Bolton Street, Kennington	2	—	—	—	—	3
"	Brompton, S.W.	1	—	—	—	—	2
"	17, Riding House Street, W.	1	—	—	—	—	1
"	Peckham	1	—	—	—	—	1
"	Adelaide Place, West Strand	1	—	—	—	—	1
"	Putney	1	—	—	—	—	1
North London Collegiate School	46, Camden Street, N.W.	1	—	—	—	—	1
Park Chapel Girls' School	1, Camera Square, Chelsea	1	—	—	—	—	1
Private School	9, Fitzroy Square	3	—	—	—	—	1
"	4, Wellington Terrace, Camberwell	—	—	—	—	—	1
"	Bermuda Place, Peckham	1	—	—	—	—	1
"	23, Clarence Road, Kentish Town	1	—	—	—	—	1
"	Croydon	1	—	—	—	—	1
Portman Chapel School	22, Dorset Street, Portman Square	1	—	—	—	—	1
Private School	79, Euston Road	1	—	—	—	—	1
"	Great Marlborough Street	1	—	—	—	—	1
"	43, Markham Square	—	—	—	—	—	1
"	2, Markham Square	—	—	—	—	—	1
"	Mulberry House	—	—	—	—	—	1
"	22, Park Street Knightsbridge	—	—	—	—	—	1
"	3, Queen Street	—	—	—	—	—	1
"	81, Riding House Street, W.	—	—	—	—	—	1
"	21, Stratford Place, Camden Town	—	—	—	—	—	1
"	5, The Grange, Brompton	1	—	—	—	—	1
"	3, Winchester Street, Fimlico	1	—	—	—	—	1
Ragged School	Coburg Row	—	—	—	—	—	1
"	Grotto Passage, Marylebone	—	—	—	—	—	1
Roman Catholic School	Gate Street, Lincoln's Inn	—	—	—	—	—	1
Royal Military Asylum	Chelsea	—	—	—	—	—	1
Somerset House School	Somerset Street, Bristol	1	—	—	—	—	20
					20		1

Appendix B.
ATTEND-
ANCE AT
LECTURES
AT SOUTH
KENSING-
TON.

SOUTH KENSINGTON MUSEUM.

ATTENDANCE at a SERIES of LECTURES on Science Instruction, April and May 1860.

School or College.	Address.	School- master, mistress,	Pupil-Teachers.		Students.		Total.
			Male.	Female.	Male.	Female.	
Aldersgate Street School	Charterhouse Square, E.C.	1	1		1		1
All Saints' School	Knightsbridge	1	1		1		1
All Souls' School	St. Pancras Street, W.C.	1	1		1		1
Ashburnham College	17, Riding House Street, W.	1	1		1		1
Bowyer, St. John's School	Chelsea	1	1		1		1
Boys' Model School	South Lambeth	1	1		1		1
" National School	Boro' Road, S.	2	1		1		2
" Home	Chiswick	1	1		1		1
British School	Fuston Road, N.W.	1	1		1		1
"	Battersea	1	1		1		1
"	Bermondsey	1	1		1		1
"	Brixton	1	1		1		1
"	Clapham	1	1		1		1
"	Lambeth	2	1		1		2
Birkbeck's Schools	South Lambeth	3	1		1		3
British School	Stockwell Green	1	1		1		1
Camden National Schools	Bethnal Green	1	1		1		1
Capper House School	White Cross Place, Finsbury	1	1		1		1
Christ Church School	Peckham	1	1		1		1
"	Kensington	1	1		1		1
"	Bermondsey	1	1		1		1
"	Green Walk, Blackfriars	1	1		1		1
"	Marlborough Street, Great Charlotte Street	1	1		1		1
"	St. George-in-the-East	1	1		1		1
"	Westminster	1	1		1		1
Coburg School	Rochester Row	1	1		1		1
Collegiate School	Hollywood Place, Brompton	1	1		1		1
Congregational School	De Beauvoir Town	1	1		1		1
Dedham Literary Institute	17, Bloomsbury Square	1	1		1		1
Foundation Commercial School	Whitechapel	1	1		1		1

Appendix R.

ATTENDANCE AT LECTURES AT SOUTH KENSINGTON.

ATTENDANCE at a SERIES of LECTURES on Science Instruction—*cont.*

School or College.	Address.	School-master.	Pupil-Teachers.		Students.		Total.
			Male.	Female.	Male.	Female.	
St. Barnabas and St. Philip's	Brought forward	53	20	9	1	2	99
St. Barnabas School	Old Brompton	1	—	—	—	—	1
"	South Lambeth	1	—	—	—	—	1
St. Clement's Dances Charity School	South Kennington	—	—	—	—	—	1
St. Dunstan's Parochial School	Barkingside Wells Road	—	1	—	—	—	1
St. George's School	Milton Street, Dorset Square	—	1	—	—	—	1
"	South Lambeth	—	1	—	—	—	1
St. George the Martyr	Bloomsbury	—	—	—	—	—	1
St. John's School	Borough Road	—	—	—	1	—	1
St. James' National School	Brixton	—	—	—	—	—	1
St. John the Evangelist	Bernondsey	—	1	—	—	—	1
St. John's School	Hertford Street, Fitzroy Square	—	1	—	—	—	1
St. Jude's National School	15, Tichborne Street, W.	1	—	—	—	—	1
St. John's National School	Islington	1	—	—	—	—	1
"	Duncan Terrace	—	—	—	—	—	1
St. James' National School	St. John's Wood	1	—	—	—	—	1
St. John's National School	Clapham	2	—	—	—	—	2
St. Luke's National School	Waterloo Road	1	—	—	—	—	1
"	Lower Norwood	2	—	—	—	—	2
St. Mark's College	Nutford Place	1	—	—	—	—	1
St. Mary's Roman Catholic	Chelsea	1	—	—	—	—	1
"	Clapham	—	—	—	—	—	1
"	Cheltenham	1	—	—	—	—	1
"	Hammersmith	1	—	—	—	—	1
"	York Street, Marylebone	—	—	—	—	—	1
"	Putney	—	—	—	—	—	1
"	Southampton	—	—	—	—	—	1
St. Marylebone Central National	Clarence Street, Old Kent Road	1	—	—	—	—	1
St. Matthew's School	Crayford Street, Marylebone	1	—	—	—	—	1
"	Marylebone	2	—	—	—	—	2
St. Michael's National School	Bethnal Green	1	—	—	—	—	1
"	Southwark	1	—	—	—	—	1
St. Michael's National School	Brixton Road	1	—	—	—	—	1
St. Pancras National School	Dutton Street, Crompton Street, W. O.	1	—	—	—	—	1

APPENDIX S.

Appendix S. ANNUAL REPORT of the DIRECTOR-GENERAL of the GEOLOGICAL SURVEY of the UNITED KINGDOM, the MUSEUM of PRACTICAL GEOLOGY, and GOVERNMENT SCHOOL of MINES for the Year 1860.

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BEFORE I enter upon the detailed proceedings of the different branches of the establishment under my direction, including the Geological Survey of the United Kingdom, with its subordinate divisions, Museum of Practical Geology, and of the Government School of Mines, I wish to say a few words of general import as regards the progress of these bodies.

I have first the satisfaction to state that as the nature and object of our geological researches in the field are becoming better understood by the public, the sale of our maps and their descriptions has very largely increased. In the past year the number of coloured maps and sections issued to the public amounted to 4,843 copies, being an increase of 2,790 copies as compared with the sale of last year. The anticipation contained in my last report has therefore been fully borne out. I then inferred that the recommendation to employ various agents throughout the country for the sale of the maps of the Survey would cause the labours of my colleagues to be more widely diffused, and that our publications would prove to a great extent remunerative as soon as their true value was ascertained.

My request for the appointment of additional surveyors, with a view particularly to the more rapid completion of the examination of the rich mining fields of Scotland and the North of England having been granted, five additional surveyors are in the course of being appointed. Although these gentlemen have to pass through preliminary training, and cannot therefore be expected to perform much effective service in the year to come, I confidently trust from the sound instruction they will receive from the Local Director, Professor Ramsay, that two years hence we shall witness a great advance in the delineation of the subsoil of some of the most important mineral tracts of Great Britain.

Turning from the Survey to the affiliated School of Mines, I have been rejoiced to witness the desire of the Professors to advance the diffusion of those sciences on which geology is based. I have to report that several of my colleagues desirous of rendering the resources of our institution more widely useful, have undertaken to deliver evening lectures open to the public at almost a nominal fee. This labour was commenced by Dr. Hofmann in a course of ten lectures on chemistry, which proved eminently successful, upwards of 250 persons having regularly attended. The second of the series by Professor Tyndall, on electrical and magnetical phenomena, and the third by Professor Huxley on the first principles of Physiology, are now in the course of delivery, and promise to be equally successful. A course on geology and mineralogy by Mr. Warrington Smyth will complete the series for the present session.

It cannot indeed, be doubted, that these lectures, so accessible to the middle and industrial classes, will gradually become a feature of this institution, not less prominent than the evening lectures which are delivered to the working men. Let us also hope that they may materially assist the Department of Science and Art by the instruction of schoolmasters, and thus make the elements of physical science a part of the primary education of the country.

Geological Survey of Great Britain.—The Local Director, Professor Ramsay, reports that 832 square miles occupied by the younger Secondary and Tertiary rocks have been surveyed in the counties of Berks, Hants, Sussex, Kent, Surrey, and Middlesex. Forty square miles of oolitic rocks were mapped in Oxfordshire; and in Yorkshire, Nottinghamshire, Cheshire, and Lancashire, 413 square miles were completed of Coal measures, Magnesian limestone, and New Red Sandstone. In Scotland 241 square miles were also mapped, chiefly in the Fifeshire Coal-field. The whole area in England and Scotland surveyed during the year amounts to 1,526 square miles. My associates have now extended their labours from the western regions occupied by the older rocks, all of which have long ago been mapped and published, to the counties around the metropolis into which this vast city extends its arms, and I now hope that this district will be as completely mapped as are already the districts around Dublin and Edinburgh.

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The annexed index maps (A.) will show the present state of the survey and indicate the progress made in the mapping of Oxfordshire, Nottinghamshire, Yorkshire, Cheshire, Lancashire, and extensively in the counties around and to the south and east of London; and (B.) the progress and state of the Geological Survey of Scotland.

As a six-inch map of Lancashire does exist, we have naturally taken advantage of it, Mr. Hull having coloured four sheets of it geologically, now published, and which I doubt not will be readily purchased by the proprietors and miners. Four additional 6-inch sheets are being engraved.

Maps on the one-inch scale relating to various counties in England and Scotland, and extending over an area of 1,285 miles, are in the hands of the engraver, as well as the ten sheets on the six-inch scale of the Edinburgh and Haddington Coal-fields. Two memoirs by Mr. Hull, descriptive of the recently published sheets of the Lancashire Coal-field and of the Leicestershire Coal-field, have been issued, as well as memoirs illustrative of parts of Leicestershire and Northamptonshire by Mr. Aveline and Mr. Trench. Four other memoirs are in the press and will be speedily published, including one by Mr. Bristow on the Isle of Wight, and another by Messrs. Howell and Geikie on the Coal-fields and country surrounding Edinburgh. One hundred and one miles of horizontal sections have been constructed across the Edinburgh and Derby and Nottingham Coal-fields, and four sheets of sections have been published and issued. Various sheets of new maps have been published on the one-inch scale, comprising an area of 2,135 square miles.

If with the same apparent force a smaller amount of mapping has been prepared than in the last year, the difference is accounted for, first, by the inclemency of the past summer, which of itself reduced the number of days available for field-work nearly one-third, next by the absence of Professor Ramsay, on the continent to recruit his health, thus necessitating the withdrawal of Mr. Bristow from his ordinary field-work, and also, by my having called for the services of Mr. Geikie, in the North of Scotland, to aid me in completing an important work in the classification of the Scottish rocks, to which allusion will be made hereafter. Again the effective force was virtually diminished by the translation in the middle of the year of Mr. Trench to the Geological Survey of India, and further it is to be remembered, that the practice recently introduced, of preparing short memoirs to illustrate each map, has necessarily somewhat abbreviated work in the field, whilst everyone must admit that it has much increased the usefulness of our principal publications.

In consequence of an application from the Secretary of State for War, I requested Professor Ramsay to proceed to Plymouth, and to advise with

Appendix S. the commanding officer of Engineers at that arsenal as to the place most suitable for the sinking of a well to supply the new fort of Scraesdon with water.

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Geological Survey of Ireland.—Mr. Jukes, the Local Director of the Irish Survey, reports that the new ground surveyed and mapped on the six-inch scale in the last year amounts to about 730 square miles in the counties of Clare, Tipperary, Queen's and King's counties, and Kilkenney. The accompanying index map (C.) shows the portion of country examined in 1860. If it be remarked that the area of field-work is considerably less than the average of former years, Mr. Jukes explains the fact by his having, (with my entire approbation), employed a larger portion of the time of his surveyors in condensing the knowledge obtained in former years, and recorded on the six-inch maps and in field books, with a view to the preparation of proper descriptive memoirs and sections. In fact, the mere surveying without publication of any illustrations had gone on to so great an extent, that it was highly necessary to moderate the field-work until these deficiencies were remedied.

Of the one-inch map 14 additional sheets have been reduced from the six-inch sheets and published, making a total of 85 sheets out of the 205 sheets in which the geography of Ireland is represented. Again, the different colours in the index map (D.) explain the present state of the maps of the Survey on the one-inch scale.

Thirteen memoirs explanatory of these maps have been added to the 10 previously issued, whilst 11 others are in the press and many more are in preparation.

Eight sheets of longitudinal sections have been published which illustrate about 281 miles of ground, those phenomena only of the sub-soil being represented which are really known to the field surveyor. This plan of making geological sections in Ireland is, in fact, necessarily adopted in the large central tracts of that country which are covered by immense accumulations of drift and bog, through which the rocks rarely protrude, and where subterranean mining operations are unknown.

The collection of the Irish Geological Survey has been increased by 1,100 specimens of fossils. The comparative smallness of this addition is accounted for by Mr. Baily, one of the senior geologists who has charge of the fossils, as well as the collector, having been mainly occupied in naming and arranging fossils previously collected. Of these 7,958 specimens have been examined, and of the latter 1,650 have been named, tableted, and placed in the Museum and Lecture-room; 2,000 more have been set aside as duplicates, and the remainder rejected. Acting chiefly as a palæontologist, Mr. Baily has further done good service by describing and figuring many fossils, as published in the Explanations of the Maps of the Survey.

The sale of the Irish Geological Maps is as yet very limited, though it seems to be increasing, 355 sheets, 95 explanations, and 2 sheets of sections having been demanded by the public.

The small amount of mining industry in Ireland is probably one great cause of this state of things. But as 256 sheets of the maps have been supplied to agents in England, together with sundry sections, Mr. Jukes states that in all 814 sheets of maps and 40 sheets of sections have been disposed of. On this point the Local Director thus writes—"Our work is intended for the future rather than the present. The public must become more generally acquainted with geology before a general interest will be taken in our publications as a means of intellectual instruction or recreation. Their practical value will in like manner only be fully

"appreciated when the public in general understand their use. Their present dissemination therefore must be looked at as means towards these desirable ends, and as preparing the way for a much larger and more continuous sale eventually. At present their very existence is not known to many persons, who would be glad to possess them, so that I have no doubt that the sale would be largely increased by a wider and more general system of advertisement."

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Natural History Branch of the Survey and Museum.—Under the management of Professor Huxley 4,859 specimens of fossils have been tabletted and placed in the Museum by his assistants, Mr. Etheridge and Mr. Sharman. The chief work has been the re-arrangement and re-mounting of a large part of the Silurian collection, the naming and labelling the valuable collection of Tertiary shells purchased from Professor Morris; the re-arrangement of the Echinodermata of the Chalk; and, above all, the commencement of a primary catalogue of all the specimens of fossils contained in the Museum.

For the construction of this catalogue, which will form a precise record of every specimen in the Museum, all the cases have been provided with distinctive numbers, corresponding books being kept by which every specimen can at once be referred to. When completed, as Professor Huxley hopes it may be in the present year, this catalogue will be a complete inventory of the property of the Government contained in the fossil collection, and will serve as the basis of those detailed scientific catalogues which will ultimately be produced.

Among the donations to this branch of the Museum (a list of which is appended, III.), may be specially cited some valuable Pterodactyle remains from Earl Ducie, which have been described by Professor Huxley; a fine collection of Miocene fossils from Malta, sent here by Captain Hutton, 23rd Fusiliers; a suite of fossils from Western Australia from Mr F. Gregory, &c.

The most important purchase during the past year has been the Harrisonian Collection of Fish and Reptiles from the Lias of Lyme Regis. According to Professor Huxley these organic remains not only fill up an important lacuna in the collections of the Museum, but from the beautiful state of their preservation are objects of great attraction to the public.

Owing to a change in the period appointed for the delivery of his lectures in the Government School of Mines, Professor Huxley has been so continuously employed in lecturing, whilst his vacation was prolonged unfortunately by a domestic affliction, that the publications of the Survey which were reported as advancing last year have made little progress. In conjunction, however, with Sir Philip Grey Egerton he has commenced a new Decade of Fossil Fish.

The exact delineation of the Liassic groups of fossils in their range from Whitby and Scarborough in the north-east to Penarth and Watchet in the south-west which Mr. Etheridge was directed to define by personal examination in the field, will be of great use to future palæontological classification in the Museum. The same gentleman in company with Professor Ramsay and Mr. Bristow has examined in detail the different Tertiary fossils in the strata on the coast of Sussex, from Bangor to Selsea, to aid the purposes of the Survey.

The new duties, as an evening lecturer, which Professor Huxley, in common with several of his colleagues, has volunteered to execute, have been adverted to in the opening paragraph of this report.

Mr. Salter, the Palæontologist, reports that, in accordance with my direction of last year, he has given undivided attention to the clearing away of the stores of Palæozoic fossils. All boxes and parcels have been

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examined, useless specimens rejected, and those fit for the Museum named and placed in it. Thus 2,000 named specimens have been sent to the cases and 10,750 to the room containing duplicates, 400 of the latter having been laid aside for the Irish and Scottish Museums.

Mr. Salter also undertook at my desire the examination of a band of the lowest Silurian Slate Rocks, (the *Lingula* Flags or Primordial Zone of Barrande), and has found it to be very rich in undescribed fossils, a report on which will be printed this year. He has further prepared two memoirs; one of which is on the Tertiary Flora of the Isle of Wight, the other being an inquiry into the organic contents of some of the beds of iron stone in the South Welsh coal-field, which has a bearing that may prove to be of considerable economic importance.

By ascertaining the true detailed succession of the fossils in our coal-fields,—a subject which has as yet been little attended to in England,—the palæontologist may hope materially to assist, if not in some respects to guide, the labours of the mining engineer and coal-viewer. To this end I have authorized Mr. Salter, who called my attention to the subject, to prepare a circular requesting information to be furnished, with specimens from each band of these rocks, in the anticipation that in future reports I may announce some satisfactory results.

As a rigorous and extended examination of the coal-fields of Scotland and the north of England must be carried out, now that the number of our field surveyors is augmented, the labours of the Palæontologist will necessarily be increased.

Museum of Practical Geology and Library.

The collections of the Museum and books in the Library have considerably increased by the donations during the past year, as is shown in the lists appended (II. and IV.)

The number of visitors to the Museum during the past year has amounted to 25,029, which is 280 less than that of the preceding year. Considering the number of wet days during the past season, it is remarkable that the number was not more diminished. 935 copies of the Descriptive Guide to the Museum, and 30 copies of the Catalogue of the contents of the Mining Record Office, have been sold at 6d. each, realizing 24l. 1s.; and 213 copies of the Explanatory Catalogue of the Rock Specimens at 1s. each, realizing 10l. 13s. These amounts (34l. 14s.) have been paid into the Exchequer.

The progress made in the completion of the inventories of the whole contents of the Museum, referred to in my last Report, has been checked by the resignation, in the early part of the year, of Mr. Fedden, who received a more lucrative and permanent appointment on the Indian Survey. The difficulty of finding a properly qualified person to take temporary employment as an Assistant Curator is great; and I fear that, unless such an officer can be appointed permanently, it will be impossible for the Curator, who, as Registrar of the School and Librarian, has other duties to perform, to complete this important and necessary work.

School of Mines.

The early period at which this report is called for does not allow of a return being completed for the session 1860-61. The session is divided into two terms, the first commencing in October and the second in February. Four courses of lectures are commenced in October and completed in the first term, and the remaining five courses are commenced in February. It is therefore impossible to add any further information to the Tables which were furnished later in the past year and

printed in the last Report. The following courses of six lectures each were delivered to the working men in the evenings of the past year. They continue to be as attractive as ever, the whole of the tickets (600) being applied for and issued generally within two hours.

- | | | | | |
|------------------|---|---|---|-----------------|
| 1. On Chemistry | - | - | - | by Dr. Hofmann. |
| 2. On Metallurgy | - | - | - | by Dr. Percy. |
| 3. On Physics | - | - | - | by Dr. Tyndall. |

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Lectures in connexion with the British Museum, but delivered in the Theatre of the Museum by special permission.—Professor Owen, the Superintendent of the Natural History collections of the British Museum, delivered an instructive course of twelve lectures on Fossil Mammalia, which were as usual well attended.

Professor Melville, of Galway, who by the appointment of the Trustees of the British Museum, holds at present the Swiney professorship, delivered another course of twelve lectures on geology. These lectures are free to the public, but the attendance at them has not been so great as might have been expected. By the arrangement of the Trustees the two next courses will be delivered in Edinburgh and Dublin.

Mining Records.—Although the labours of Mr. Robert Hunt have been to some extent impeded in 1860 by severe indisposition, he has continued to embody and publish a considerable mass of important mining data. Thus, the second part of the Mineral Statistics for 1858, has been published, containing returns of the clays, brick manufactures, building stones, &c., and also the Mineral Statistics of 1859.

It has also been ascertained that since the year 1858, when the total annual produce of the British coal mines amounted to 65 millions of tons, the return of 1859 showed an increase of nearly seven millions of tons, making a total of 71,979,765 tons.

The usefulness of the Mining Record Office is proved by the fact that the British Commissioners for settling the commercial treaty at Paris applied for and received from us a large amount of information respecting the production and manufacture of copper in this country.

The estimation in which the labours of Mr. Robert Hunt are held by the mining proprietors and smelters of Britain was recently proved by their presenting to him a handsome testimonial; and from having myself presided over the Mineral and Agricultural section of the International Statistical Congress, I can testify that the account offered to the meeting by Mr. Hunt, of the produce of the British Mineral Industries during the last twenty years, gave great satisfaction to the Foreign Statists who honoured us with their presence.

Chemical Laboratory.—Dr. Hofmann, to whose additional course of evening lectures in Jernyn Street I have already alluded, sends to me an account of the number of students, both matriculated and occasional, who have attended during the past year the practical course of Chemical Analysis given in the Laboratories of the School of Mines. By comparing the detailed account of the last and present years it appears that the attendance has remained pretty constant, having nearly reached the maximum, or greatest number which can be conveniently instructed in the Laboratories.

Dr. Hofmann acknowledges with great pleasure the able assistance he has received from Mr. W. Valentin, and Mr. C. E. Groves, in conducting the instruction of the students both in the laboratory and in the lecture-room. The amount of scientific work which has been done by the researches of Dr. Hofmann and his assistants can alone be estimated by referring to the Journal of the Chemical Society and the proceedings of the Royal Society. There is, however, one subject into which our

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The partial decomposition of the stone of which the two Houses of Parliament are built is proceeding with such rapidity that an effectual remedy may, it is hoped, be speedily discovered. In consequence, the President of the Board of Works has intrusted Dr. Hofmann with an inquiry into the processes proposed for the preservation of the stone.

In addition to his other occupations, Dr. Hofmann has continued to assist the Department of Science and Art by conducting chemical examinations at South Kensington, where the candidates in chemistry formed as usual the majority, and largely exceeded the number examined last year.

The number of Students in the Chemical Laboratory was as under:—

	1859.	1860.
Spring Session	41	39
Summer „	38	35
Winter „	49	34
	128	108

Metallurgical Laboratory.—Dr. Percy informs me that during the past year the Admiralty and Board of Works have availed themselves of the resources of the Metallurgical Laboratory. To the former he has rendered every assistance in his power in reference to questions of great public interest; and to the latter he has, in conjunction with Professor Tyndall, presented the results of an analytical investigation concerning the great bell of the Houses of Parliament, which have been published in a Parliamentary report. Examinations and analyses of mineral substances and metallurgical products have also been made.

In reference to the above-mentioned services of Dr. Percy and Professor Tyndall relating to the causes which led to the crack in the great bell of the Houses of Parliament, I have reason to know that their labours have given great satisfaction to the Government authorities. I may also state that, in consequence of the desire of Dr. Percy to obtain full information respecting the composition and manufacture of bell-metal and the casting of bells in Russia, I applied to the Chief of the Imperial Corps of Mining Engineers, and obtained from him the most complete information which could be afforded. Lieutenant-General Samarsky has not only communicated a very valuable and elaborate memoir, illustrated by diagrams, as prepared by Lieutenant de Babin, at Moscow, but has also transmitted a suite of specimens of the metal used in the construction of the most celebrated Russian bells.

Dr. Percy reports that the attendance of students in the Laboratory devoted to practical instruction has been in every respect highly satisfactory, the number of applications for admission having exceeded the power of accommodation. Amongst the students may be mentioned engineers, and men whose object it is to proceed to the colonies or other remote parts of the world, with a view to mining or metallurgical enterprise.

The following is a return of the students attending the Metallurgical Laboratory in 1859 and 1860:—

	1859.	1860.
Spring Session	8	10
Summer „	2	8
Winter „	8	9
	18	27

West Indian Survey.—The report on the Geological Survey of Trinidad, by Mr. H. G. Wall and Mr. J. G. Sawkins, of which I spoke last year as being in the press, has since been published in the form of a Memoir of the Geological Survey, and is the first of a series of descriptions of the geological structure of the West Indian Islands. As Mr. Wall was a distinguished pupil of our School of Mines, who had subsequently further qualified himself by studying in the Mining School of Freiberg, in Saxony, and as Mr. Sawkins to a practical acquaintance with mining in South America adds great powers of sketching the features of a country, I fully anticipated, in recommending those gentlemen for the appointments they held, that they would efficiently execute the task entrusted to them. Their publication has entirely answered my expectation. It is a work so replete with solid and useful information, that it has given great satisfaction to the authorities and colonists of Trinidad, whilst it cannot fail to be highly estimated by geologists, not only for the faithful and clear manner in which the Secondary and Tertiary formations are shown to succeed to the crystalline metamorphic or altered rocks (probably of Silurian age), but also to serve as a key to our better acquaintance with the internal structure of vast masses of the adjacent parts of the continent of South America. To that region, indeed, Mr. Wall afterwards repaired as a volunteer geologist, and has, in a memoir read before the Geological Society, completely proved the extension of the Trinidad deposits over an enormous area. The coast sections and map of Trinidad are much to be valued from their development of beds of Tertiary coal, which is found to be available for the purposes of steam navigation.

On the retirement of Mr. Wall, his place, as head of the West Indian Survey, was filled up by the appointment of Mr. Barrett, who, possessing an intimate knowledge of palæontology, is therefore well qualified to elaborate with accuracy the relations of the various Secondary and Tertiary deposits of the great island of Jamaica, which was placed under his survey in association with Mr. Sawkins. Already we know that Mr. Barrett has determined a point of considerable interest to geologists and miners in making it known that the copper mines of Jamaica occur in strata of no higher antiquity than the younger cretaceous and nummulitic Tertiary formations of Europe and Asia. We may therefore look with interest to the complete report of Mr. Barrett.

Mr. Sawkins has recently visited the small islands of Anguilla, situated to the north of St. Christopher's, where, from specimens sent home, there was reason to expect that much valuable phosphatic rock might be found, similar to that of the neighbouring island of Sombbrero, which has proved so valuable in the hands of certain speculators of the United States. The report of Mr. Sawkins, which has recently been sent to me by Her Majesty's Secretary for the Colonies, is, however, unfavourable to the hope entertained, in a commercial point of view; for, although large portions of the surface of the small islands or "quays" lying to the north of St. Christopher's contain bony matter, and might to some extent prove useful in agriculture, from the per-centage of phosphate of lime they contain, they are said to be too partially spread out to be of much economic importance.

Publications in the Press.—The printed works have been already alluded to under their respective heads. There is now in the press Part III. of the Iron Ores of Great Britain, containing those of South Wales. We have been much indebted to Mr. E. Rogers, of Abercarn, for very valuable assistance rendered in the descriptive portion of this work; and I trust it will be found as useful to the large mining and manufacturing interest of that part of the country as the first two parts (now out of print) proved to be:

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Appendix S. A third edition of the Explanatory Catalogue of the Rock Specimens in the Museum, by Professor Ramsay and his associates, is called for.

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Conclusion.—Having shown that the public are now taking a greatly increased interest in the Geological Survey, by a much larger purchase of our Maps and Sections than in former years, that the Professors have augmented the usefulness of the School of Mines by the delivery of additional evening lectures, and that by chemical and metallurgical inquiries they are rendering important service to the Government; I may now be excused for alluding to the continuance of my personal geological researches in the north-west of Scotland during the last summer. In directing the Survey I naturally felt anxious that the proofs of the ascending order of succession from a basement rock more ancient than in any other portion of the British Isles, which I have been accumulating for some years, should be clearly established; for, although my views as regards the north-western parts of Scotland, had been amply confirmed by my colleague, Professor Ramsay, as well as by the independent researches of Professor Harkness, it was, nevertheless, essential to ascertain that the same ascending order was, as I had suggested, prolonged by great undulations over the wide Highland regions occupied by such crystalline stratified rocks. To determine this point I requested Mr. Geikie to accompany me during two months of survey, and our labours have so completely satisfied us as to the truthfulness of our inferences, that we have prepared for publication a small geological sketch-map of the whole kingdom, in which the chief masses of the crystalline strata of the highlands are shown to be the altered equivalents of the Silurian rocks of the southern counties of Scotland. This map has been executed by Mr. Geikie, whose acquaintance with the structure of the south of Scotland peculiarly qualified him for the task. Whilst the changes which we propose are very great as respects every pre-existing geological map of Scotland, and are of fundamental importance, we well know that this little sketch-map can simply serve as a basis only of general classification. Accurate outlines and details can only be given when the Ordnance maps of the region shall be published.*

Lastly, having seen with regret in the “Times” newspaper of the 21st instant, a detailed notice of the great danger which has been occasioned in the new fortification now in the course of construction near Portsmouth, through the insecurity of the foundations, I beg to cite a paragraph of my report of 1859, in reference to the useful services in which the geological surveyors might be occasionally employed. Mr. Bristow (one of the senior geologists surveying near Portsmouth,) “has called my attention to the lamentable result of erecting certain portions of forts and public buildings on incoherent and slippery Tertiary subsoils, which necessarily shrink or collapse, or swell out and founder, under decomposition and pressure. On this last head I would submit that the military authorities should obtain the opinion of an experienced geological surveyor whenever such buildings are about to be raised, in order that the real nature of the foundations should be previously ascertained.”

RODERICK I. MURCHISON,
Director-General.

Geological Survey Office,
26th January 1861.

* This sketch map is not brought out at the public expense, but through the agency of the well-known geographer, Mr. A. Keith Johnston.

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DOCUMENTS added to the COLLECTION of the MINING RECORD OFFICE during the Year ending December 1860.

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1. Holmbush Mine, plan of workings.
2. Phoenix Mines, plan of underground workings.
3. do. longitudinal section.
4. United Hills Mine, plan of part of sett.
5. do. longitudinal section.
6. do. transverse sections.
7. Budnick Consols, plan of underground workings.
8. do. longitudinal section.
9. Tamar Silver Lead Mine, plan of underground workings.
10. do. longitudinal section of workings under the river Tamar.
11. Section of Artesian Well, Birmingham.
12. Great Huel Vor Mines, transverse section on all the shafts.
13. Pelton Colliery, section of Kirklelington Bore Hole.
14. Somerset Coal Field, longitudinal section.
15. Ebbw Vale, vertical section of.
16. Bog Mine, plan of underground workings.
17. Rhaidol United, plan of workings.
18. Cinderhill Colliery, section of strata.
19. do. below coal No. 1 Pit.
20. Newcastle Colliery, do.
21. Nuttall Colliery, do.
22. Kimberley Colliery, do.
23. Babbington Colliery, do.
24. do. borings under Clod Coal.
25. do. do. Main Coal.
26. Watnall Colliery, section of strata.
27. Huel Treasury, plan of mine.
28. West Huel Treasury, plan of mine.
29. do. section of Engine lode.
30. do. section of Huel Tane lode.
31. Esk Valley, section of strata containing iron beds.
32. Bogie Coal, Kirkaldy, journal of workings.
33. Huel Noweth, proclamation of.
34. St. Austell Consols, transverse section on Young's shaft.
35. do. plan of underground workings.
36. do. transverse section of main lode.
37. do. longitudinal section.
38. do. transverse section on Nickell branches.
39. Great Work Consolidated Mines, plan of underground workings.
40. do. longitudinal section of.
41. do. do. South Huel Breage.
42. West Crinnis and Regent United, plan of.
43. Huel Grey, Germoe, plan of workings.
44. do. longitudinal section of Balls' lode.
45. Great Hewas, plan of workings.
46. West Par Consols, section of tin lode.
47. do. plan of underground workings.
48. Bodmin Huel Mary, plan of workings.
49. do. transverse section.
50. Leeds Town Consols, plan of.
51. Herland Mines, produce and expenditure of.
52. Vale of Neath Coal-field, section of.
53. Huel Alfred, copper ore sold since 1794.
54. St. Andrew's Mine, report and return of.
55. Hallamanning, rules and regulations of.

- Appendix S. 56. St. Ives Fuel, Allan, report and plan.
 REPORT OF 57. Euy's, Mine longitudinal section.
 DIRECTOR- 58. do. income and expenditure.
 GENERAL 59. Polligey Moor Mine.
 OF THE 60. Whiteside Mines, plan of levels.
 GEOLOG- 61. Grinton Moor Mine, plan of levels.
 ICAL 62. do. plan of Wellington vein.
 SURVEY, 63. do. plan of Swinstow brow level.
 &c. 64. do. plan of Grovebeck level.
 65. Royal Polberrow Consolidated Mines, plan.
 66. do. longitudinal section of upper levels.
 67. do. transverse section looking east.
 68. do. do. looking west.
 69. Huel Music, section of Champions lode.
 70. do. longitudinal section of south lode.
 71. do. do. of lead lode.
 72. do. plan of lodes.
 73. do. transverse section on south lodes.
 74. do. do. on lead lode.
 75. do. longitudinal section of north lode.
 76. Huel Betsey, plan of and adjoining setts.
 77. Huel Kitty, plan of underground workings.
 78. do. transverse sections.
 79. do. longitudinal section.
 80. Penhall's Mine, longitudinal section.
 81. do. plan of sett. showing lodes.
 82. Great Briggan, map of lodes.
 83. North Budnick and Mount Mine, plan of sett.
 84. South Huel Ellen, plan of underground workings.
 85. do. longitudinal section.
 86. do. working plan.
 87. do. transverse section of.
 88. Huel Ellen plan of sett.
 89. Blue Hills Mine, transverse section.
 90. Huel Prudence St. Agnes, plan of underground workings.
 91. do. transverse section.
 92. do. longitudinal section.
 93. Consolidated Mines Cobre, plan of underground workings.
 94. North Roskear Mine, longitudinal section of part of.
 95. Prussian Coal-fields, maps and sections of the.
 96. South Staffordshire, 205 sections of the Coal-field.
 97. North Staffordshire coal sections.
 98. Flintshire and other mines, assays of lead and silver from 1794 to 1808.
 99. Smith's Wood Mine, plan of sett.

In addition to these many Mine Reports, Prospectuses, Account, and other documents have been received.

ROBERT HUNT, Keeper of Mining Records.

II.

DONATIONS to the MUSEUM.

THE LORDS COMMISSIONERS OF THE ADMIRALTY.—Specimen of an agglutinated mass containing rupees, glass, &c. dredged up by the divers of H.M.S. "Retribution" from the "Ava," lost off Trincomalee, Ceylon, 16th February 1858.

GARDNER & Co., Messrs.—A cube of building stone from the quarries at Birch Hill, Forest of Dean.

SKIPP, Mr. G.—Two cubes of building stone from Whimberry Quarry, 5 miles north of Sydney, on the South Wales Railway.

- RAYNES, LUPTON, & Co., Messrs.—Specimens of Pen-maen Mawr Stone, extensively used for paving roads, as sets, curbs, &c. ; also of the dressing hammers.
- DARBY, H. B., Esq.—A specimen of magnetic iron ore, said to contain 54 per cent. of metal, from a bed averaging 32 feet in depth, situate in Rosedale, south-west point of Cleveland.
- THE FITZROY MINING COMPANY.—Specimens of iron and iron ore from the Company's Works, Mittagong, New South Wales.
- DE NOUVION, M. Gustave.—A specimen of antimonial grey copper ore (Fahl-ore) containing 163 oz. of silver per ton. from the mines of Hiedelancina, province of Guadalajara, 21 leagues from Madrid.
- SORBY, Mr. H. C., F.R.S.—Concretion from the shale below the upper bed of Millstone Grit in a tunnel west of Sheffield.
- MERRIFIELD, Mrs.—A specimen of Websterite, from near Newhaven, Sussex.
- WHALLEY, Mr. G. H., M.P.—A specimen of building stone from a quarry at Garth, in the parish of Llangollen, in the county of Denbigh.
- GREAVES and KEISHAM, Messrs.—Six specimens to illustrate the applications of the stone from their quarries in the Lower Lias beds, at Wilncote, Stratford-on-Avon.
- WHITFORD and CARTER, Messrs.—A specimen of iron ore from Trebisken, Perranzabuloe, Cornwall.
- FRANCIS, George Grant, F.S.A.—A specimen of earthenware from the "Newcastle" Pottery.
- DUNDAS, Robert, Esq.—A cube of porphyry, polished on one face, from Broadlow Quarry, 15 miles south of Edinburgh.
- HAWKINS, Walter, Esq.—Cast of footsteps of the Labyrinthodon, being a facsimile of the under surface of a slab of New Red Sandstone raised from a bed of clay in the Stourton Hill Quarry, 1838.—Cast of footsteps of unknown animals, and of a vegetable, occurring in a quarry of New Red Sandstone at Stourton Hill, Cheshire. The impressions in this cast are taken from several slabs.
- THE PATENT PLUMBAGO CRUCIBLE COMPANY.—An interesting series of specimens to illustrate the manufacture of the Patent Plumbago and other crucibles and apparatus employed in metallurgy ; also two models of assay furnaces, and three specimens of plumbago.
- HITCHINS, M. T., Esq.—A fine specimen of iron pyrites from the Perran Iron Mines, Perranzabuloe, Cornwall.
- HOWDEN and THRESH, Messrs.—One of their patent miners' safety lamps.
- ZENNER, D.—A model of a rotating buddle for washing minerals.
- HUNT, John, Esq.—Specimens of pyromorphite (phosphate of copper) from Huell Rose, near Kelstone.
- GUTHRIE, Col.—A magnificent specimen of Realgar, carved by the Chinese ; in case, with stand.
- FIDLER, Thomas, Esq.—A specimen of argentiferous galena from the "North Devon" Silver Lead Mine, Combmartin.
- BATES, Joshua, Esq.—Specimens of spathose iron ore, with the iron made therefrom, from Weardale.
- NOWELL, Mr. George A.—An interesting specimen, exhibiting the occurrence of lead ore in a seam of coal from the Haunch Wood Colliery, Nuneaton.
- ROTHWELL, Mr. Richard.—A substance occurring in cavities at the Pont-y-Gasag Copper Mines, Anglesea. (Composition to be determined.)
- JONES, H. J., Esq. (through T. Rupert Jones, Esq.)—Ironstone geodes from the Lower Greensand of Linsdale, near Leighton Buzzard.
- PAINE, C., Esq.—A terra-cotta vase and stand, manufactured at the Dippenhall Works, Farnham, Surrey.
- HOCKIN, John, Esq.—A very fine crystal of magnetic iron pyrites from Morro Velho, Brazils.
- OLIVER, Daniel, jun., Esq.—A specimen of flexible magnesian limestone from Marsden Bay, Durham.
- WHITFORD, S., Esq.—A specimen of silver glance, Mount Mine, Perranzabuloe, Cornwall.

- Appendix S. KIRKALDY, Mr. John.—A specimen of magnesian limestone (Botryoidal beds), from a quarry lately opened on the side of Fullwell Hills, near Sunderland, belonging to Sir Edward Williamson, Bart.
- REPORT OF DIRECTOR-GENERAL OF THE GEOLOGICAL SURVEY, &c. JORDAN, Henry B., Esq.—A specimen of plush copper (fibrous red oxide) from South Wheal Francis, Redruth.
- WILLIAMS, Rev. James.—Two ancient stone hammers found in Anglesea.
- DAILL, Telef.—A very fine crystal of orthite from Avendal.

III.

* DONATIONS of FOSSILS to the MUSEUM.

- January 2nd.*—Sir WOODBINE PARISH.—Several fragments of *Iguanodon* bones, &c., from the Wealden of St. Leonard's.
- January 2nd.*—The Rev. Jos. GOULD, Burwash.—2 specimens of Wealden plant remains.
- January 7th.*—THOMAS WOOD, Esq., from Capt. F. W. HUTTON, Malta, 23rd R. W. Fusiliers.—2 boxes containing 325 specimens from the Maltese beds (Miocene).
- January 14th.*—Master WARD, Clapham.—2 teeth; 1 *iguanodon*, 1 crocodile, Cuckfield (Wealden).
- January 18th.*—Mr. H. WILD.—20 specimens from the Woolwich beds, Peckham; *Paludinæ*, *Cyrenæ*, *Cerithiæ*, *Volutæ*, *Unionidæ*, &c.
- February 1st.*—T. ASH, Esq.—Portmadoc, Carmarthenshire.—*Hymenocaris* (caudal portions) and other fossils from the Lingula Flags of N. Wales.
- February 7th.*—ALEXANDER CLARKE, Esq.—Some fine specimens of *Annelide* burrows and *Orthoceras* from quartz rock in Sutherlandshire.
- February 19th.*—JOHN EVANS, Esq., Nash Mills, Hemel Hempstead.—Fine specimen of fossil wood, Leighton Sands.
- February 20th.*—G. ROBINS, Esq., Bath.—3 specimens of *Lithodomi* in coral, Portland Beds, Portland.
- March 12th.*—The Earl of DUCIE.—2 specimens of *Rhamphorynchus Bucklandi*, from the Stonesfield Slate of Sarsden.
- March 12th.*—JAMES H. ANGUS, Esq., Edinburgh.—5 specimens of *Rhizodus Hibberti*, from the Edinburgh Coal-field.
- April 5th.*—THOMAS M. K. HUGHES, Esq., Llandovery Vicarage :—

6	specimens from the Llandeilo Flags,
8	Lower Llandovery.
16	Upper Llandovery.
4	Wenlock Shale.

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- April 17th.*—BENNETT, Esq., Bristol (per W. SAUNDERS, Esq.)—3 specimens of *Paradoxides* from the St. John's Slates of Newfoundland.
- April 17th.*—GEOLOGICAL SOCIETY OF LONDON.—30 specimens of carboniferous fossils, Spitzbergen.
- April 28th.*—J. LUMLEY, Esq., Stamford.—1 fine specimen of *Ammonites bifrons*; 6 Rock specimens of *Lias*.
- April.*—W. WHITAKER, Esq.—7 casts of Chalk and Eocene fossils.
- May 10th.*—THOMAS WATSON, Esq., Whitby :—

3	specimens of <i>Ammonites bifrons</i> .
3	communis.
4	annulatus.
1	<i>Inoceramus</i> .
1	Cast of <i>Trigonia</i> .
8	specimens of the remains of <i>Plesiosaurus</i> .

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19
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- May 10th.*—E. LUXMORE, Esq.—specimens from the Lower Greensand of Atterfield, Isle of Wight.
- May.*—J. JONES, Esq.—7 specimens of *Gryphæa obliqua*, from the Lower Lias of Gloucestershire.
- June.*—Captain ROBERT TAYLEUR.—1 specimen of *Cyathophyllum regium*.
- June 10th.*—R. D. DARBESHIRE, Esq., Manchester.—3 specimens of a new Brachiopod from the Caradoc Shales, Conway.
- June 18th.*—F. T. GREGORY, Esq. (per Sir R. I. MURCHISON).—28 Carboniferous fossils, 13 Cretaceous, Western Australia.
- June 25th.*—Dr. F. A. GEINITZ, Dresden.—106 Peruvian fossils from Gera.
- July 26th.*—Dr. A. FRITSCH.—7 Trilobites from the Silurian formation of Bohemia.
- July 28th.*—HUGH OWEN, Esq., Bristol.—1 specimen of *Baculites*, from Upper Greensand of Warminster.
- August 1st.*—HOLLAND, Esq., Dumbleton.—1 specimen of *Geoteuthis* (hooks of), Marlestone.
- October.*—Rev. — GUNN.—1 fine specimen of *Elephas meridionalis*, Pleistocene, Norfolk.
- October.*—JOHN LUBBOCK, Esq., jun.—2 boxes of *Bos*, and portion of *Elephas*, from Greenstead, Pleistocene.
- November 3rd.*—R. D. DARBESHIRE, Esq.—10 specimens of *Diplograpsus pristis*, from the Caradoc of Conway.
- November 8th.*—R. WARD, Esq., Leominster.—1 specimen of *Goniatites Henslowi*, from the Carboniferous Limestone of Isle of Man.
- December.*—NEVILLE, Esq., Leominster.—2 specimens from the Lower Greensand of Nutfield.
- December.*—H. P. PRICE, Esq.—Part of tusk of *Elephas*, from Crayford, Erith, Thames.
- December.*—Rev. Professor HENSLOW.—1 specimen of *Ammonites biplex*, from the Boulder clay of Hitcham.
- December 21st.*—CLARK, Esq., Folkstone.—34 specimens from the Gault.

REPORT OF
DIRECTOR
GENERAL
OF THE
GEOLOGICAL
SURVEY,
&c.

IV.

DONATIONS to the LIBRARY.

- THE LIBRARY COMMITTEE OF THE CORPORATION OF LONDON.—The new classified Catalogue of the Library of the Corporation of London. 1 vol. 8vo. cloth bound. 1859.
- THE MINISTRE DE L'INTÉRIEUR DE LA NÉERLANDE.—Bosquet. Monographie de Brachiopodes.
- THE PHILOSOPHICAL INSTITUTE OF VICTORIA.—Vol. 3 of the Transactions of the Institute.
- THE SECRETARY OF STATE FOR FOREIGN AFFAIRS.—Rogers' Geology of Pennsylvania. 2 vols. 4to. With Maps.
- McCHESNEY, Mr. J. H., of Chicago.—Descriptions of new Species of Fossils from the Palæozoic rocks of the Western States. 8vo. unbound. 1859.
- WILLIAMS and NORGATE, Messrs.—Essai sur l'État actuel de l'Industrie Ardoisière en France et en Angleterre, par L. Symers, jne. 1 vol. 12mo. 1858.
- THE COMMITTEE OF THE BRISTOL MINING SCHOOL.—Lectures delivered at the Bristol Mining School.
- JOHNSON, Henry, Mr., Dudley.—Lithographic drawing of a fossil fern, *Pecopteris tertii*.
- THE ROYAL UNIVERSITY OF CHRISTIANIA.—Scripta academica, viz. :—
Sars et Kjerulf Jagttagelser. 4to. pamphlet. 1860.
Bjerknes.—Über die Geometrische Repräsentation der Gleichungen zwischen zwei veränderlichen, reellen oder Komplexen Grössen. 4to. pamphlet. 1859.
Münch.—Chronica Regum Manniæ et Insularum. 8vo. 1860.
Kjerulf und Dahll.—Om Kongsberg Ertsdistrikt. 8vo. 1860.
Dahll.—Om Telemarkens Geologie.

- Appendix S.** THE BAVARIAN GOVERNMENT (through his Excellency the Minister).—Return of the Productions of the Salines and Mines in the Kingdom of Bavaria for the year 1858-59.
- REPORT OF DIRECTOR-GENERAL OF THE GEOLOGICAL SURVEY, &c.** ADHÉMAR, M. J.—*Révolutions de la Mer.* 1 vol. 8vo. With plates. 1860.
- DET KONGELIGE DANSKE VIDENSKABERNES SELSKAB.—Oversigt over det Kongl. danske Videnskabernes Selskabs Forhandlinger for Aaret, 1858. Det Kongelige Videnskabernes Selskabs Skrifter v. Række. Naturvidenskabelig og Mathematisk Afdeling. IV. Bd. 2 Hfte & V. Bd. 1 Hfte.
- LEA, Dr. Isaac, of Philadelphia. *Observations on the Genus Unio.* Vol. 7. 4to.
- RAMSAY, Professor.—*The Old Glaciers of Switzerland and North Wales.* 1 vol. 12mo. cloth. 1860.
- THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—12th Volume of the Proceedings.
- THE OFFICERS OF THE AMERICAN ACADEMY.—*Memoirs of the Academy.* New Series. Vol. VI., Part II.—*Proceedings.* Vol. IV., Sheets 12-31.
- THE GOVERNOR, IN BEHALF OF THE STATE OF IOWA.—*Report on the Geological Survey of the State of Iowa.* 2 vols. small 4to. 1858.
- THE EDITORS OF THE AMERICAN JOURNAL OF SCIENCE AND ARTS.—Nos. 76 to 83 of the Journal.
- SWALLOW, G. C., Esq.—*The First and Second Annual Reports of the Geological Survey of Missouri.* 1 vol. 8vo. 1855.—Also, *Geological Report of the Country along the line of the South-western Branch of the Pacific Railroad, Missouri.* 1 vol. 8vo. 1859.
- THE REGENTS OF THE SMITHSONIAN INSTITUTION.—*The Annual Report of the Board.* 1 vol. 8vo. 1859.
- OWEN, David Dale, Esq.—*The Second and Third Reports of the Geological Survey of Kentucky.* 2 vols. 8vo. With maps.
- BACHE, Prof. A. D.—*Report of the Superintendent of the Coast Survey, showing the progress of the Survey during 1857.* 1 vol. 4to.
- WAR DEPARTMENT, U.S.—*Explorations and Surveys for a Railroad Route from the Mississippi River to the Pacific Ocean.* Vol. X. 4to.
- OHIO STATE BOARD OF AGRICULTURE.—*Twelfth Annual Report for the Year 1857.* 1 vol. 8vo.
- THE U.S. COMMISSIONERS OF PATENTS' REPORTS for the Years 1857, 1858, and 1859. 8 vols. 8vo.
- THE AUSTRIAN GOVERNMENT (through the Foreign Office). Part IV. of the *Geological Maps of the Austrian Empire.*
- LONGMAN, GREEN, LONGMAN, and ROBERTS, Messrs.—Parts of *Ure's Dictionary*, completing the work.
- THE SOCIÉTÉ IMPÉRIALE DES NATURALISTES DE MOSCOU.—*Le Bulletin of the Society.*
- DAUBRÉE, M.—*Etudes et Expériences synthétiques sur le Métamorphisme et sur la Formation des Roches cristallines.* 1 vol. 4to. 1860.

V.

RETURN of MAPS and SECTIONS of the Geological Survey of England supplied to Agents during the Year ending 31st December 1860.

	1859.	1860.
Whole sheets - - - -	419 -	1,176 copies.
Quarter sheets - - - -	1,247 -	2,604 "
Horizontal sections - - -	222 -	587 "
Vertical sections - - - -	114 -	316 "
Index of signs and colours - -	13 -	12 "
Small Index maps - - - -	38 -	114 "
Sheets, 6 inches to 1 mile - -	- -	34 "
	2,053	4,843

GEOLOGICAL SURVEY
Explanation

The Plates in the Map	Published	to 31 st Dec 1860.
Coloured these are	to 31 st Dec 1860.	
D ^o thus	Surveyed	Engraving
D ^o thus	Complete	Preparing for Engraving
D ^o thus	In Progress	
D ^o thus	Index Map	

GEOLOGICAL SURVEY	Number of Plates Published.	58.
	D ^o Counties Complete	7.
	D ^o of Hor. Sections	6. Price 5 ^s each
	D ^o of Ver. Sections	26. Price 3 ^s 6 ^d each

INDEX MAP
(A)

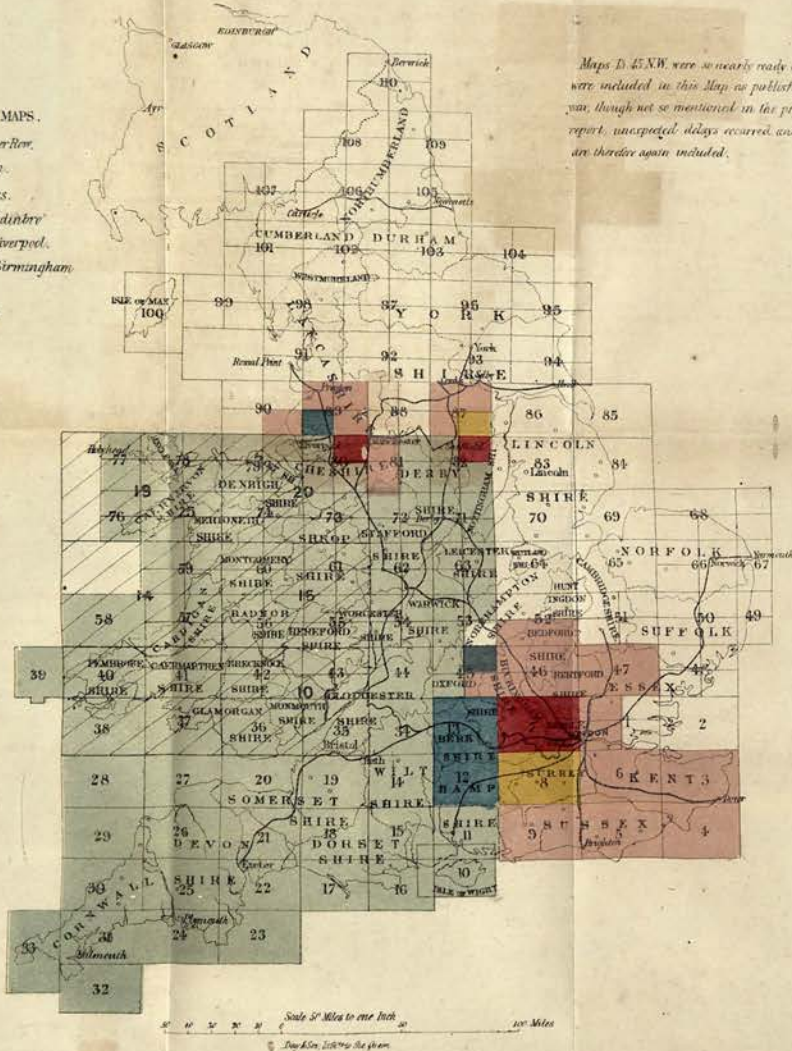
to the
GEOLOGICAL SURVEY OF GREAT BRITAIN
(ENGLAND AND WALES)

Published
in Sheets on a Scale of one Inch to a Mile.
Showing the Progress to
Dec. 31st 1860.

AGENTS
for the

SALE OF THE GEOLOGICAL MAPS.

Mess^{rs} Longman & C^o Paternoster Row.
Mess^{rs} Lettis & Son, London.
M^r Stanford Charing Cross.
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Mess^{rs} G. Philip & Son, Liverpool.
Mess^{rs} Napper & Wright Birmingham.
M^r Lavers Bristol.
M^r G. Stammers, Manchester.
M^r A. Lea, Gloucester.



Maps D. 45.N.W. were so nearly ready that they were included in this Map as published last year, though not so mentioned in the printed report; unexpected delays occurred and they are therefore again included.

And *Wm Ramsay*
Local Director of the Geological
Survey of Great Britain
31st December 1860

INDEX MAP
(B)
to the
GEOLOGICAL SURVEY,
OF GREAT BRITAIN
SCOTLAND)

Showing the Progress to
31st Dec^r 1860.

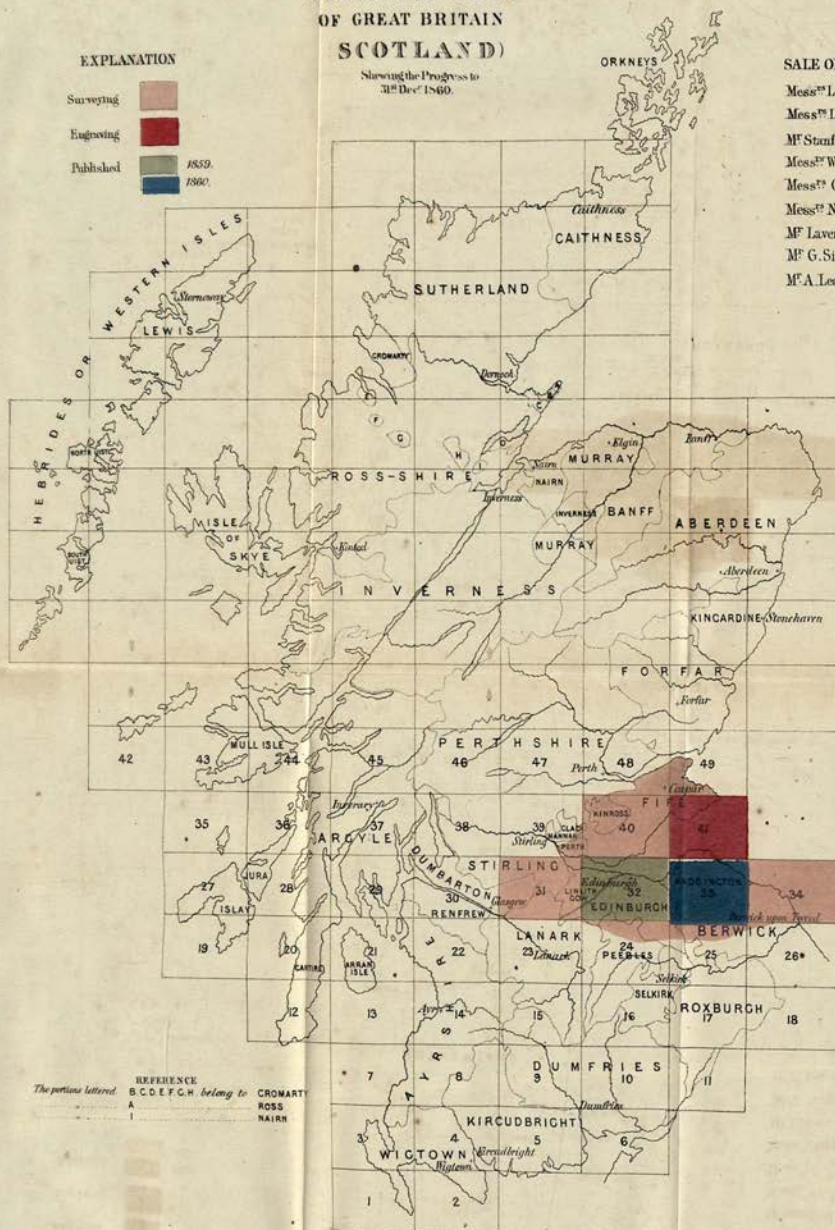
EXPLANATION

Surveying 1859.
Engraving 1860.
Published 1860.

AGENTS

for
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Mess^{rs} Longman & Co. *London.*
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Mess^{rs} G. Philip & Son. *Liverpool.*
Mess^{rs} Napper & Wright. *Birmingham.*
M^r Lavers, *Bristol.*
M^r G. Simms. *Manchester.*
M^r A. Lea. *Gloucester.*



REFERENCE
SCOTCH. belong to
A. CROMARTY
I. ROSS
H. NAIRN

Scale: 32 Miles to One Inch
30 20 10 0 10 20 30
Imperial Standard Scale

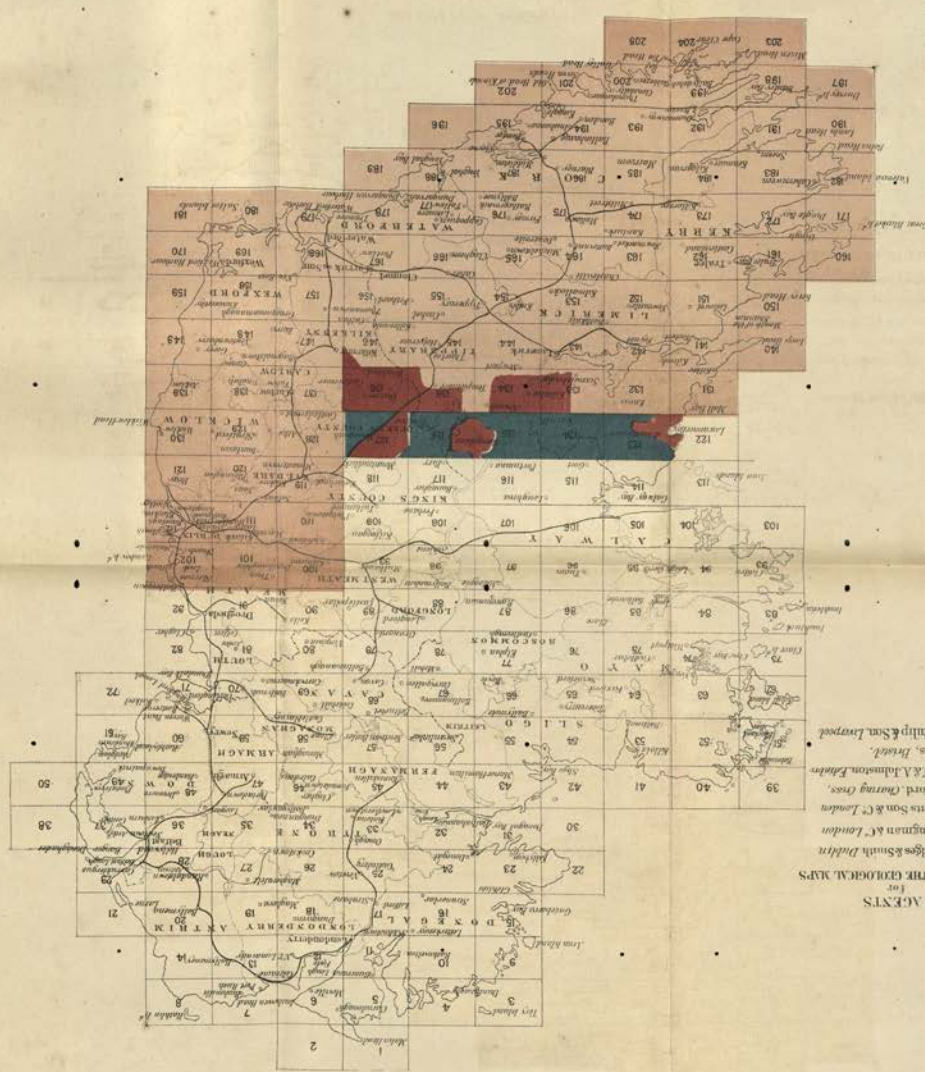
And^m Ramsay
Local Director of the Geological
Survey of Great Britain
31st December 1860

INDEX MAP

Coloured to show the state of the
ON THE SIX INCH MAP
at the close of the Year 1860.

AGENTS
FOR THE SALE OF THE GEOLOGICAL MAPS

Messrs Bridges & Smith Dublin
Messrs Longman & Co London
Messrs Lewis Son & Co London
Messrs Stanford, Charing Cross
Messrs W & A Johnston Dublin
Messrs Phillips & Son Liverpool



Best Index
(Stone Director)
Jan 9 1860

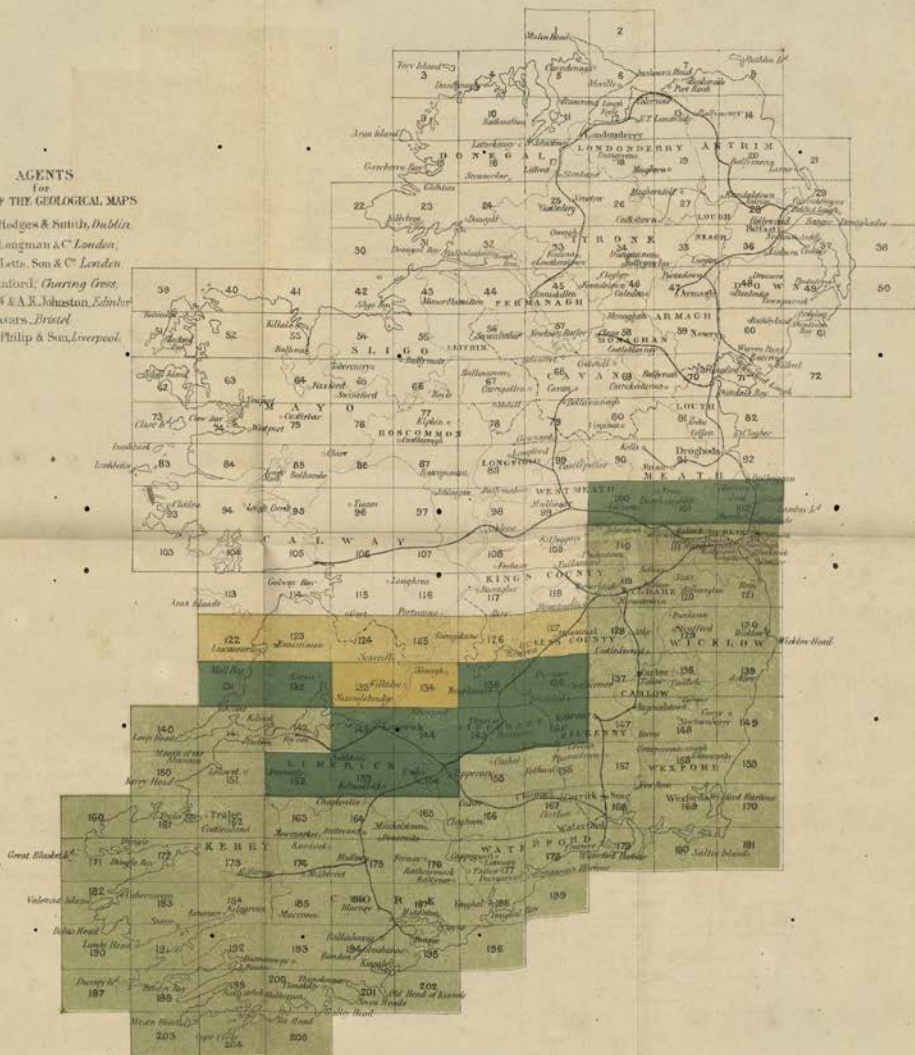
Not near to be
Area surveyed
Area surveyed

INDEX MAP (D)

Coloured to shew the state of the
publication of the results of the
GEOLOGICAL SURVEY OF IRELAND
ON THE ONE INCH MAP
at the close of the Year 1860.

AGENTS for SALE OF THE GEOLOGICAL MAPS

Messrs. *Hodges & Smith, Dublin*
Messrs. *Longman & Co. London*
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Messrs. *W & A R. Johnston, Edinburgh*
Messrs. *J. L. Lavett, Bristol*
Messrs. *Philip & Son, Liverpool*



- Sheets published during 1860.
- Sheets published previous to 1860.
- Lines being engraved.
- Sheets preparing.

Scale, 2 Miles to the Inch.
Bar Scale 1000 Yds. to the Inch.

J. Beete Jukes
(Local Director)
Jan 4 2nd 1861

APPENDIX T.

REPORT of the CONDITION and PROGRESS of the MUSEUM OF IRISH INDUSTRY and GOVERNMENT SCHOOL OF SCIENCE APPLIED TO MINING AND THE ARTS, for the Year 1860, by Sir ROBERT KANE, F.R.S., M.R.I.A., Director.

Appendix T.
REPORT OF
DIRECTOR
OF MUSEUM
OF IRISH
INDUSTRY.

THE work of arranging and classifying the several collections in the Museum has been considerably advanced during the past year, and the additional specimens obtained have been distributed among the technological series to which they respectively belonged. By means of such acquisitions the educational value of the collections has been much enhanced, and their objects rendered more intelligible to the ordinary class of visitors. As the arrangement of the collections proceeds, the preparation and affixing of full descriptive labels is carried out.

Satisfactory progress has been made in the preparation of the systematic catalogue; considerable portions of the divisions embracing the British and Foreign porcelains and earthenwares, and the British and Foreign fuels and iron ores and iron manufactures have been already prepared and are in the press.

Amongst the additions to the Museum have been a collection of Foreign woods used in building and cabinet work, and of fabrics manufactured from wood, Foreign and Irish; various illustrations of the uses of palms, stalks, leaves, and fibres in tropical countries. This branch of economic botany may be considered as now very completely represented in the Museum. A collection of materials used in paper-making, with an interesting series illustrative of the stages of that manufacture, and various samples of paper from China, and manuscripts written on bamboo paper.

The collection of cereal and leguminous seeds employed as food has been arranged, and also an interesting series of fruits and seeds employed for ornament and other domestic purposes.

An important collection of the lichens and the dyes manufactured from lichens, together with miscellaneous woods, and other vegetable substances used in dyeing, and various colouring substances of vegetable and animal origin, has been arranged.

An interesting series of sponges derived from the Bahamas and the coast of Africa, a series of real white and black corals from Sardinia and the coast of Barbary, with the tools and materials employed in working coral, a collection of tortoise shells, horns and tusks, with various illustrations of their uses, are also arranged in their suitable places in the Museum.

In the division illustrating the manufacture of glass and enamel, a series of glass enamel and porcelain, ornamental beads, and also imitations of coral, jet, amber, &c., have been added.

A series of copper ores and other associated rocks and minerals from the Dhurode Mine, co. Cork, presented by the Rev. M. Cash, has been added to the metallurgic collection.

A series of beryls, fluors, garnets, and other minerals which possess very great value as mineralogical and geological illustrations, has been procured, and also a highly interesting specimen of native gold in quartz from Mount Alexander, Australia, in which the geological relations of the gold-bearing lode are usefully illustrated.

Appendix T. The arrangement and labelling of the mineral collection is still in progress, but the determination of mineral specimens is necessarily a long and laborious work, when effected with that accuracy which alone can give scientific value to the results, or render the collection worthy of its place in the Government School of Science applied to Mining and the Arts.

REPORT OF
DIRECTOR
OF MUSEUM
OF IRISH
INDUSTRY.

A collection of Neapolitan cameos, and of the rocks from which they are produced, has been obtained, which illustrates a very interesting branch of industrial art, and also throws light on the origin of those materials; those objects usually, though incorrectly, described as formed from lavas, being really cut from rocks of the cretaceous and jurassic formation, and which are popularly confounded with adjacent rocks of volcanic origin.

A list of the several donations presented to the Museum will be found annexed, Appendix A., and a list of specimens purchased will be found, Appendix B.

The Museum galleries were open on all week days from 11 till 4 o'clock, during which time there visited the collections, from 1st January to 31st December, 24,065 persons, being an increase of 509 on the similar number for the preceding year.

The galleries were also open to the public on the evenings when lectures were delivered from 7 till half-past 9 o'clock, and during the winter months in addition on Mondays and Thursdays within the same hours. The total number of visitors in the evenings for the year was 8,934, making the total number of visitors in the year 32,999.

Chemical Department.

Very satisfactory progress has been made in this department during the past year under the zealous direction of Mr. Galloway. Five of the most important coals employed in gas lighting have been analysed, and analyses of various varieties of Irish and British coals, together with determinations of their heating powers, have been made for illustration of the gallery collections. Twenty-seven analyses of waters have been made for the corporation of Dublin in reference to the important question of the supply of water to that city, and many other analytical investigations of industrial and scientific interest have been carried out by Mr. Galloway and the session laboratory students under his direction. Several interesting original memoirs, embodying those results, have been already communicated to the scientific journals by those gentlemen, and have tended materially to extend the popularity and support the character of the Museum and of the department with which it is connected; and it is interesting to mention that Mr. John Dowling, late a practical student of this class, has been appointed by the department a local teacher of chemistry, under the provisions of the Science Minute, and has given courses of instruction in Limerick and Clonmel, where his teaching has been eminently successful, as manifested by the result of the examination of his pupils, which has met with the marked approval of the heads of the department and of the committee of lectures.

Library.

The library of the Museum has been open during the session to registered students of the Government School of Science applied to the Arts. The number attending was £57, giving a daily average of 3.67. The attendance was almost entirely in the evening, as the class of students are usually otherwise occupied during the day.

Government School of Science applied to Mining and the Arts.

Appendix T.

The systematic and popular courses of instruction in the sciences applied to industry have been conducted by the professors during the past year with satisfactory results, in accordance with the arrangements described in the programmes for the sessions 1859-60 and 1860-61, which had received the sanction of my Lords.

In the course of the year now closed (1860), in January and February, Professor Jukes delivered a systematic course of 30 lectures on geology in the theatre of this institution, for which 42 students were registered.

At the termination of the course 11 students presented themselves for examination, of whom 8 obtained certificates of proficiency.

In February and March Professor Sullivan delivered a course of systematic lectures in the theatre of this institution, for which 39 registered pupils were entered. At the examination closing the course 11 students competed, of whom 3 received certificates.

In January and February Professor Barker delivered in the theatre of the Royal Dublin Society, 20 lectures, being the first part of the systematic course on natural philosophy, and in April and May he gave 18 lectures, being the second portion of that course, in the theatre of this institution. For that course 35 registered students were entered, of whom 10 competed at the final examination, and 6 received certificates.

In April Professor Harvey delivered a public evening course of 6 lectures on economic botany in the theatre of this institution, which was attended by an average of 71 persons.

In May and June Professor Harvey delivered a systematic course of 20 lectures in the theatre of the Royal Dublin Society, to which 10 registered students entered, of whom 7 competed for prizes at the final examination and received certificates of proficiency.

In October Professor Kinahan delivered a public course of 12 lectures on zoology in the theatre of the Royal Dublin Society, and in that month and November the same professor delivered a systematic course of 19 lectures in the theatre of this institution in continuation and completion of the former. Of this course the first 12 lectures were public, and were attended by an average of 84 persons, and to the full course 16 registered students were entered, of whom 12 competed at the closing examination and received certificates.

In October and November Professor Barker delivered a course of 12 public lectures in the theatre of the Royal Dublin Society.

In November Professor Sullivan delivered a course of 12 public lectures on chemistry in the theatre of the Royal Dublin Society; and in December the same professor delivered a course of 12 public lectures on chemistry in the theatre of this institution, which were attended by an average of 153 persons.

In November Professor Jukes delivered in the theatre of this institution a course of 12 public lectures on physical geography, which were attended, in average, by 138 persons; and in December the same professor delivered a course of 12 public lectures in continuation of the same subject in the theatre of the Royal Dublin Society.

Dr. Kinahan has conducted in the past year the class of practical zoology with great success, and has by its organization materially promoted the accurate study of natural history in Dublin. For this class, in the last session, 9 students entered, and at the examination two prizes were given for distinguished answering. For the similar course in the current session 6 students have already entered.

Instruction in practical chemistry was given by Mr. Galloway, in the laboratory of the Museum, every day during the past and the current session. The general session is divided into two laboratory terms; 7 day pupils attended the first, 6 day pupils the second term; 15 evening pupils

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Appendix T. attended the first, and 22 the second term. The conduct and diligence of the students merit the highest praise. No examination was held of the senior students, as the various original papers published by them form the best evidence of their proficiency. In addition to the prizes, Mr. Galloway conferred two free admissions on the most distinguished students. A special class was formed for practical organic chemistry, at the examination of which most satisfactory results were obtained, six students having competed and received certificates, as was also the case in the examination of the junior class, in which three students competed and received certificates.

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At the close of the session in June the general examination in all the subjects was held, one student competed, but the answering not having attained the standard required by the examiners, the candidate received a certificate, but was not recommended for the silver medal.

Prizes and certificates were awarded after each class examination to the students who had manifested suitable proficiency, and the examining professors having reported very favourably on the results, my Lords were pleased to award bronze medals of the department to each of the candidates who had obtained first places, and who had been recommended by the examiners for that distinction.

The number and nature of the prizes and certificates given will be found in Appendix C., and the names of those who received medals are given in Appendix D.

The session was closed on the 25th June by the distribution of the several medals and prizes, on which occasion his Excellency the Earl of Carlisle, K.G., Lord Lieutenant, honoured the institution by presiding, and was pleased to express his satisfaction with the arrangements and with the progress which the system of industrial instruction had made. On this occasion the ceremony was attended by 650 persons.

The business of the current session was opened on October 1st, when I had the honour to deliver an introductory address on the industrial history and uses of the fatty substances, as illustrated by the collections of the Museum. This meeting was attended by 490 persons.

(Signed) ROBERT KANE,
Director of the Museum of Irish Industry.

15th January 1861.

A.

LIST of DONATIONS presented to the MUSEUM OF IRISH INDUSTRY from the 1st January to the 31st December 1860.

A series of specimens of copper ore, and the associated rocks from Dhurode Mine, co. Cork.

Presented by the Rev. M. Cash and F. Lisabe, Esq., C.E.

A collection of specimens of litharge and lead from the Cupelling process.

Presented through Robert Heron, Esq., from the Mining Company of Ireland.

Two specimens of timber gum tree from Port Arthur, Tasmania.

Presented by J. Smith, Esq.

Specimen of sulphuret of antimony from Achil island.

Presented by Miss Egan.

B.

Appendix T.

LIST OF SPECIMENS purchased and added to the MUSEUM COLLECTIONS, from the 1st January to the 31st December 1860.

	£	s.	d.	REPORT OF DIRECTOR OF MUSEUM OF IRISH INDUSTRY.
Specimens of moss agate and chalcedony	-	-	-	0 6 0
A collection of old English pottery	-	-	-	20 0 0
A Canadian girdle made of porcupine quills	-	-	-	0 5 0
Specimens of coral	-	-	-	7 8 0
Mineral specimens	-	-	-	9 10 0
Specimen of agate	-	-	-	0 1 6
A set of models of furnaces, condensers, chambers and build- ings used in the manufacture of salt cake, muriatic acid, and chloride of lime	-	-	-	32 5 0
Specimen of ironstone	-	-	-	0 1 0
Mineral specimens	-	-	-	16 0 0
Specimens of lava portraits, &c.	-	-	-	3 0 0
" of aventurina	-	-	-	0 5 0
Mineral specimens	-	-	-	0 11 0
Diagrams of copper furnaces	-	-	-	8 8 0
Specimens of Irish wood	-	-	-	0 16 0
" of Egyptian grass	-	-	-	0 3 0
Mineral specimens	-	-	-	8 2 0
Diagrams of lead and copper furnaces	-	-	-	5 2 0
Specimen of auriferous quartz	-	-	-	5 0 0
Diagrams of lead furnaces	-	-	-	3 18 0

C.

EXAMINATION in ZOOLOGY.—Session of 1859-60.

Examiner, JOHN R. KINAHAN, M.D.

1st Prize	-	-	-	David B. Hewitt.
2nd "	-	-	-	Charles H. Brien.
3rd "	-	-	-	John Pierce.

EXAMINATION in PRACTICAL ZOOLOGY.—Session of 1859-60.

Examiner, JOHN R. KINAHAN, M.D.

1st Prize	-	-	-	Not awarded.
2nd "	-	-	-	Miss Hester A. Harman.

EXAMINATION in GEOLOGY.—Session of 1859-60.

Examiner, J. BEETE JUKES, M.A.

1st Prize	-	-	-	Not awarded.
2nd "	-	-	-	Robert P. Penny.
3rd "	-	-	-	Alexander Macalister.

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EXAMINATION in PHYSICAL SCIENCE.—Session of 1859-60.

Examiner, WILLIAM BARKER, M.D.

1st Prize	-	-	- Richard Fitzgerald.
2nd „	-	-	- Myles O'Reilly.
3rd „	-	-	- Walter G. Smith.

EXAMINATION in CHEMISTRY.—Session of 1859-60.

Examiner, WILLIAM K. SULLIVAN, Ph. D.

1st Prize	-	-	- Not awarded.
2nd „	-	-	- David B. Hewitt.
3rd „	-	-	- John O'Donovan.

EXAMINATION in BOTANY.—Session of 1859-60.

Examiner, WILLIAM H. HARVEY, M.D.

1st Prize	-	-	- Miss Hester A. Harman.
2nd „	-	-	- Philip P. Lyons.
3rd „	-	-	- John Pierce.

EXAMINATION in PRACTICAL CHEMISTRY.—Session of 1859-60.

Examiner, ROBERT GALLOWAY, F.C.S.I.

Organic Class.

1st Prize.	-	-	- William J. Wonfor.
2nd „	-	-	- Robert Simpson.
3rd „	-	-	- James Birney.

Junior Class.

1st Prize	-	-	- Henry O'Hara.
2nd „	-	-	- William Harold.

GENERAL EXAMINATION in GEOLOGY, ZOOLOGY, BOTANY, PHYSICS, and
CHEMISTRY.—Session of 1859-60.

EXAMINERS :

J. BEETE JUKES, M.A.	WILLIAM BARKER, M.D.
JOHN R. KINAHAN, M.D.	WILLIAM K. SULLIVAN, Ph. D.
WILLIAM H. HARVEY, M.D.	

2nd Prize -	-	-	- John Pierce.
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D.

Medallists.

Miss Hester A. Harman.
David B. Hewitt.

E.

SUMMARY.

Appendix T.

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	Totals.
The number of persons who visited the Museum from the 1st January to the 31st December 1860 inclusive was	24,065
Number of Students who visited the Library of the Museum from the 1st January to the 31st December 1860, including the usual recess	557
Professor Jukes' Systematic Lectures	1,008
Dr. Sullivan's ditto	822
Dr. Barker's ditto	366
Dr. Kinahan's ditto	1,108
Professor Jukes' Free Lectures	1,663
Dr. Sullivan's ditto	1,840
Dr. Harvey's ditto	430
Number attended the Distribution of Prizes	650
Number attended Sir Robert Kane's Address	490
	32,999

NUMBER of STUDENTS who competed for Prizes in the Year 1860.

Natural Philosophy	-	-	-	-	-	-	10
General Chemistry	-	-	-	-	-	-	11
Practical Chemistry	-	-	-	-	-	-	9
Geology	-	-	-	-	-	-	11
Botany	-	-	-	-	-	-	7
Zoology	-	-	-	-	-	-	6
Practical Zoology	-	-	-	-	-	-	2
General Examination	-	-	-	-	-	-	1

APPENDIX U.

Appendix U. ANNUAL REPORT of the ROYAL DUBLIN SOCIETY for the
YEAR 1860.

REPORT OF
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SOCIETY.

To the LORDS of the COMMITTEE of PRIVY COUNCIL for EDUCATION,
DEPARTMENT of SCIENCE and ART.

THE Society continues in as efficient a state as the limited means supplied to it for the support of so vast an establishment will allow.

During the year 1860 the Society has been increased by the admission of fifty-four members.

The fourth annual examination for general and commercial certificates of merit was held last year during the week commencing the 28th May 1860.

Thirty-nine candidates applied to be examined, of whom thirty-seven presented themselves.

After a careful examination the Board of Examiners adjudged the certificates and prizes as follows, the names of the candidates being in the order of merit:—

Commercial Certificates (3).

Robert Henry Dagge.
Howard McGarvey.
James Glanville.

General Certificates (18).

James Glanville.	Patrick Gavin.
David Nevin.	Edward Field.
George Minchin Smith.	Samuel H. Watson.
Richard Farrell.	James Wilson Porte.
William Bayly.	Howard McGarvey.
Arthur William Durham.	Edward Henry O'Neill.
Robert Pooley Gill.	Patrick William O'Neill.
Reginald Colthurst Graham.	Robert Henry Dagge.
David Hughes Somerville.	William Preston.

General Prizes (3).

James Glanville, 5*l*.
Richard Nevin, 3*l*.
George Minchin Smith, 3*l*.

Special Prizes (4).

Edward Field (Geometry), 1*l*.
Reginald Colthurst-Graham (Trigonometry), 1*l*.
Howard McGarvey (Mensuration), 1*l*.
Arthur William Durham (History), 1*l*.

The following is a statement of the operations of the several Departments of the Society during the past year.

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LECTURES.

Date.	Subject of Lectures.	Names of Lecturers.	No. of Lectures.	Total Attendance.	Average at each Lecture.
1860.					
Jan.	Physics - - -	W. Barker, M.D. -	20	2,949	147
Feb.	Agricultural Chemistry -	Dr. E. W. Davy -	16	495	82
March	Histoire de France -	M. D. Pontët -	8	1,873	234
April	Agriculture -	Dr. E. W. Davy -	12	1,371	114
April	Political Economy -	J. S. Leatham -	1	104	104
May	Botany -	Dr. Harvey -	12	1,044	87
June	Ditto -	Ditto -	12	598	50
June	French Language -	Dr. M. J. Frings -	8	833	104
Oct.	Zoology -	Dr. Kinahan -	12	1,419	118
Nov.	Meteorology -	Dr. Barker -	12	1,961	163
Nov.	Chemistry -	Dr. Sullivan -	14	1,705	121
Dec.	Geology -	J. B. Jukes -	12	1,510	122

BOTANIC GARDEN.

Conservatories and Buildings.—With exception of the old range, long since condemned, the plant-houses and buildings have (through the medium of the Board of Works) been maintained in a state of efficient repair. With the view of rendering the heating of the conservatories more complete, they have been furnished with three of Meiklejohn's patent boilers, the result of which is satisfactory, a higher temperature in the houses being now attainable with less fuel and labour than heretofore.

Parliament having voted a sum of money for the erection of a new conservatory to replace the old one above referred to, building operations will be commenced as soon as the weather will permit the removal of the plants.

Collection of Hardy Plants.—Many important additions have been made to this collection, which appears to be much consulted by students from the medical schools, as well as by other persons who are engaged in preparing themselves for examinations for admission into the public service.

Hardy Trees and Shrubs.—This collection has also been maintained, but as the taste for such plants appears to be extending, a much greater extent of ground could with advantage be added to the arboretum than is at present available.

Donations and Exchanges of Plants.—A much larger number of plants have been obtained for the garden during the past than preceding years. These were principally procured by the Curator, who, at the instance of the Committee and Council, visited the principal plant establishments, not only in England, but on the continent of Europe. Hence extensive exchanges have been effected with the directors of these establishments at Berlin, Hamburgh, Hanover, Amsterdam, Leyden, Antwerp, and Ghent. An extensive correspondence and system of exchanges have also been established with kindred institutions throughout the world. As a result two valuable collections have been received from Mr. Cruger, of the Botanic Garden, Trinidad; and several parcels of seeds and collections of plants from Mr. Moore, of the Botanic Garden, Sidney, New South Wales, some species of which it is supposed were not previously introduced into Britain.

Appendix U. The total number of plants received during the year 1860 is 670 species; of seeds, 686 kinds. The total number of plants given chiefly in exchange is 420 species; and of seeds, 7 packages.

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Plants for Lectures and School of Art.—The usual supplies of plants for illustration of the lectures given in the Museum of Industry, and in the theatre of the Royal Dublin Society, have been provided as required. The Professor of Botany, Royal College of Surgeons, and the lecturers on the same subject at other medical schools, have also been supplied with specimens to illustrate their lectures. Regular supplies of plants were sent in twice in each week for the use of the students in the School of Art.

Botanical Museums.—It is much to be regretted that means have not yet been provided for the preservation, display, and extension of this very interesting and instructive collection, inasmuch as the temporary building, in which the collection is at present placed, is in every respect most unsuitable for the purpose.

Visitors.—Notwithstanding the large amount of rain which fell during the past summer, the decrease in the number of persons who visited the garden is not so great as might have been expected, though still considerable, the number of persons recorded as having visited the gardens during the year 1860 amounting to 39,443.

HORTICULTURAL EXHIBITION.

• The Society held in the Agricultural Hall an exhibition of plants, flowers, fruits, and vegetables.

The exhibition was open to the public on two days and one evening, and was visited by 2,791 persons.

NATURAL HISTORY MUSEUM.

During the past year some progress has been made in fitting up the museum with cases for the reception of specimens.

A series of thirty-eight glazed cases has been completed and placed in the uppermost gallery, affording accommodation in space of about 370 square feet, and will be available for the display of the mineralogical collections. These cases rest upon the railing of the gallery, which has also been completed.

Eleven upright or wall-cases, the commencement of the ornithological collection, have been also completed, affording an extent of accommodation of 900 square feet.

As soon as a sufficient number of the mineral cases were placed in the museum, the removal of the minerals into them was commenced; and, with the kind and valuable assistance of the Reverend Professor Haughton, who has devoted considerable time to the work, some progress has been made by the Director in arranging and classifying the specimens. The absence of any means for heating the building (a state of things which the Council observe is not likely to continue) compelled a suspension of the work as soon as winter set in. The same cause has hitherto prevented the introduction and arrangement of the several stuffed specimens of birds and other animals. The collections during the past year have been extensively used for illustrating the lectures of the Professor of Zoology of the Department of Science and Art. Although the specimens are not yet very extensively displayed, yet, in consequence of the desire felt by the public, it was considered advisable to admit to the museum all who should apply. Hence the number of visitors since the middle of June last to the 31st December amounts to 3,555.

Several valuable donations have been received during the year; amongst which may be mentioned collections of birds and insects from British Columbia, presented by Dr. Charles Lyell; also of birds, &c. &c., from British Kaffraria, by Dr. Charles L. Egan, and a highly valuable and instructive collection of mammals, birds, birds' eggs, fossils, minerals

&c., presented by Captain Sir F. Leopold McClintock, R.N., formed during his late exploration of the arctic regions, together with minor donations, which have already been published in the Society's Journal.

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EVENING SCIENTIFIC MEETINGS.

Eight meetings were held during the session, from November to June inclusive. On the same evenings the Dublin Statistical Society and the Photographic Society held their meetings, at which 1,520 persons attended, averaging 190 at each meeting.

LIBRARY.

During the year 1860 the Library was open on 293 days, and the number of readers (exclusive of members of the Society) was 11,720, giving the daily average of 40.

The additions to the Library were :—

Works presented as Donations	-	-	-	69
Works purchased	-	-	-	201
Total	-	-	-	<u>270</u>

with periodicals and serials (119), and also the Parliamentary Papers of both Houses for the Session, and the Specifications of Patents as they are published. In the above are not included volumes taken in continuation of publication, nor the proceedings and transactions of other societies sent in exchange for the Journal of the Society.

It is greatly to be desired that funds were provided to the Society in order to enable it to fit up the entire suite of rooms, which are still in part occupied by the Museum of Natural History. This has been long needed; the shelf-accommodation has been for some time past exhausted, and the books are consequently piled on floors, and even amongst the framework of the roof of the building, where they may be considered inaccessible. The necessity for this is now the more urgent, as it is contemplated to open the Library to readers in the evening,—a project long desired by the Society.

AGRICULTURAL DEPARTMENT.

Spring Cattle Show.

The Spring Cattle Show was held on Thursday April 10, 1860, and three following days. The following table exhibits the principal results of the show :—

Description of Stock.	Entries or Lots.	PRIZES.		
		Money.	Medals.	Certificates.
Bulls	225	£ 36 0 0	8	1
Cows and heifers	87	16 0 0	12	—
Fat stock	56	—	17	3
Sheep (lots)	85	34 0 0	3	—
Swine (lots)	56	62 0 0	—	—
Horses	23	28 0 0	6	—
Poultry (lots)	176	29 0 0	7	—
Implements	1,103	—	—	—
	1,720	204 0 0	53	4

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Appendix U. The "Irish Farmers' Gazette" challenge cup, value 150*l.*, was awarded (first time) to Mr. Thomas Barnes, of Moynalty, county Meath.

REPORT OF THE ROYAL DUBLIN SOCIETY. The "Irish Railway" challenge cup, value 150*l.*, was awarded (also first time) to Mr. Thomas Barnes.

The "Ganly" challenge cup was awarded to Mr. J. Richardson, Glenmore, Lisburn, county Antrim.

His Excellency the Lord Lieutenant presided at the usual meeting for the announcement of the prizes awarded, which was attended by 456 persons.

The show was visited as follows:—

April 10th	-	at 5 <i>s.</i> 0 <i>d.</i>	-	Persons	107
" 11th	-	" 2 6	-	"	1,398
" 12th	-	" 1 0	-	"	5,450
" 13th	-	" 0 6	-	"	4,719
Total					<u>11,674</u>

exclusive of members,-exhibitors, herds, &c., &c.

Winter Show of Fat Stock and of Farm and Dairy Produce.

This Exhibition was held on the 11th and 12th December 1860 in the Society's Agricultural Hall, and was visited by 3,000 persons.

The chief particulars connected with this show are set forth in the following table:—

Description.	Entries or Lots.	PRIZES.	
		Money.	Medals.
		£ s. d.	
Implements - - - - -	241	- - -	-
Oxen - - - - -	15	- - -	11
Cows and heifers - - - - -	33	- - -	13
Sheep (lots) - - - - -	36	- - -	9
Swine (lots) - - - - -	16	- - -	7
Butter, honey, wools, frieze, &c. - - - - -	24	14 0 0	6
Cereals, &c. - - - - -	45	- - -	12
Turnip and mangold seeds - - - - -	14	- - -	6
Herbage plants - - - - -	9	1 10 0	-
Turnips and mangolds - - - - -	100	18 10 0	-
Fibre-yielding plants - - - - -	10	3 0 0	-
General collections of farm products (317 items) - - - - -	2	- - -	-
Collections of farm produce raised by public institutions - - - - -	3	- - -	3
Total - - -	558	37 0 0	74

Chemico-Agricultural Department.

At the conclusion of the second course of Lectures of the Professor of Agriculture, delivered in the months of April and May 1860, an Examination was held, at which eight registered pupils competed for the

rewards given by the Society, to three of whom prizes in books were awarded as follows:—

	£	s.	d.
1. George B. Saunders, 1st Prize - - -	2	10	0
2. James Elliott, 2nd Prize - - -	1	10	0
3. John Pierce - - -	1	0	0

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William J. Wonfer, also third in order of merit, an honorary certificate, as he had obtained a third prize in the preceding year.

In the Laboratory, the Professor delivered 24 practical demonstrations in Analytical Agricultural Chemistry during the months of November, December, January, and February, which 10 students attended, and at the termination of the course an examination was held, and premiums in books awarded as follows:—

	£	s.	d.
1. John A. Spencer, 1st Prize - - -	2	10	0
2. Patrick McEvoy, 2nd Prize - - -	1	10	0
3. Robert Paul, 3rd Prize - - -	1	0	0

Fifty-two analyses and examinations of manures, soils, agricultural produce, &c., have been performed, and a number of original investigations connected with agricultural subjects have been carried on.

The Professor who, by a Minute of the Department of Science and Art, is responsible for the efficiency of the Agricultural Museum, has devoted considerable time to the arrangement of this department.

An additional suite of rooms has been built in connexion with the laboratory for the accommodation of this department, the Director of the Museum of Natural History, and the professors of the Department of Science and Art, when lecturing on the Society's premises.

Agricultural Museum.

The Agricultural Museum has been visited by 14,000 persons during the past year.

The collection of grasses, cereals, and casts of vegetable products has been received from the Messrs. Lawson, of Edinburgh, and forms an instructive part of the museum.

Several important additions have been made to the collection of farm implements and machines as well as of models of farm buildings.

A useful collection of prepared specimens of domestic poultry has been added to the museum.

Many useful improvements have been effected in the building whereby increased light and ventilation have been secured.

As soon as the labelling of the specimens shall have been completed, the collection may be considered as being in a satisfactory state for being consulted.

FINE ARTS.

School of Art.

The total number who received instruction in the school during the session ending the 30th September 1860, is as follows:—

Dry Classes—Males - - -	59
Females - - -	157
Evening do.—Males - - -	98
Total - - -	<u>314</u>

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In addition to the above, 400 pupils have been instructed in parochial or other schools; and the total number of students of all kinds, pupil-teachers, art students, poor students, &c., who have been taught in or by the agency of the school has been 714.

The exhibition of prize works of students in the Society's school was visited by 244 persons. The "Taylor" prize works were visited by 281 persons.

The exhibition of the prize works of all students of Schools of Art in the United Kingdom was visited by 2,053 persons, and the prizes of the Dublin Art Union, which were exhibited in the school, by 1,942 persons.

At the annual examination of the students, held in the month of October 1860, 6 obtained prize studentships, 25 were awarded local medals, and 80 obtained 90 first and second grade prizes.

At the national competition in London, two students were awarded national medallions.

In addition to the above, prizes offered by the Society were awarded as follows:—

Landscape in oils from nature :

Francis White, 1st prize	-	-	-	£	5
Miss Davy, 2nd do.	-	-	-	-	2

Sketches in water colour :

Maria D. Webb, 1st prize	-	-	-	-	5
Francis Colles, 2nd do.	-	-	-	-	2
John Vantright (extra)	-	-	-	-	2

The visitors to the Statue Gallery amounted in number to 1,847.

ABSTRACT of RECEIPTS and EXPENDITURE for Year ended
30th September 1860.

Expenditure.

	£	s.	d.
Head Master's share of students' fees	-	-	134 13 3
Second Master's ditto (6 months)	-	-	43 19 0
Clerk's Salary (11 months)	-	-	45 16 8
Pupil-teacher's salary (9 months)	-	-	15 0 0
Attendants' wages	-	-	54 12 0
Prizes to students	-	-	43 12 3
Examples—Living model, &c.	-	-	17 8 4
Fittings and furniture	-	-	13 12 5
Painting and glazing	-	-	4 4 6
Gas-light, fuel, &c.	-	-	17 4 7
Printing, stationery, incidents, &c.	-	-	10 14 2
			£400 17 2

Receipts.

	£	s.	d.
Fees from students	-	-	280 15 3
Grant for prizes from profits of Art Exhibition	-	35	0 0
Allowance from Department for prize students	-	12	0 0
			327 15 3
Balance paid by Royal Dublin Society	-	£73	1 11

SUMMARY of ATTENDANCES of the PUBLIC on the several Departments of the ROYAL DUBLIN SOCIETY for the Year 1860.

Appendix U.
REPORT OF
ROYAL
DUBLIN
SOCIETY.

	Numbers.	Average.
Natural History Museum	3,555	—
Botanic Gardens	39,443	—
Library	11,720	40
Statue Gallery	1,847	—
Exhibitions of Art	4,520	—
Evening Meetings	1,520	190
Agricultural Exhibitions	14,674	—
Distribution of Agricultural Prizes	456	—
Ditto of Art Prizes	267	—
Agricultural Museum	14,000	—
Horticultural Exhibition	2,791	—
School of Art. Students instructed; viz.,		
Central School	314	—
Out-Schools ditto	400	—
Lectures on Physics	2,949	147
Agricultural Chemistry	495	82
Histoire de France	1,873	234
Agriculture	1,371	114
Botany, 1st Course	1,044	876
Ditto 2nd ditto	598	50
Political Economy	104	—
French Language	833	104
Zoology	1,419	118
Meteorology	1,961	163
Chemistry	1,705	121
Geology	1,501	122
Total	111,360	—

By order of Council,

WM. EDW. STEELE, M.D.,

Assistant-Secretary.

APPENDIX V.

Appendix V. REPORT of the COUNCIL of the ROYAL ZOOLOGICAL SOCIETY of IRELAND for the Year 1860.

REPORT OF THE COUNCIL OF THE ROYAL ZOOLOGICAL SOCIETY OF IRELAND. THE Council forward a statement of the number of visitors admitted to the gardens during the past year, and of the receipts and expenditure during the same period.

CHARGE.				£.	s.	d.
3,704 Members, free	-	-	-	-	-	-
977 Visitors, at 1s. 0d.	-	-	-	-	48	17 0
12,194 „ at 0s. 4d.	-	-	-	-	304	17 0
3,104 „ at 0s. 3d.	-	-	-	-	38	16 0
122,584 „ at 0s. 1d.	-	-	-	-	510	15 4
747 Public schools, and institutions, free	-	-	-	-	-	-
143,310.				£903	5	4
Government Grant	-	-	-	-	500	0 0
Members' subscriptions	-	-	-	-	306	0 0
Incidental receipts	-	-	-	-	7	12 0
Animals sold	-	-	-	-	107	0 6
Balance	-	-	-	-	345	3 7
				2,169	1	5

DISCHARGE.				£.	s.	d.
Balance	-	-	-	-	159	10 1
Animals purchased	-	-	-	-	274	1 7
Food for animals	-	-	-	-	735	18 1
Incidental Expenses	-	-	-	-	236	8 4
Salaries and wages	-	-	-	-	314	8 10
Buildings and ground	-	-	-	-	441	14 6
Interest on debentures	-	-	-	-	6	0 0
Subscription returned	-	-	-	-	1	0 0
				2,169	1	5

W. H. HARVEY, Hon. Sec.

APPENDIX W.

Appendix W.
PROVINCIAL
LECTURES,
IRELAND.

REPORT of the COMMITTEE of LECTURES to the LORDS of the COMMITTEE of PRIVY COUNCIL on EDUCATION, for the year 1860.

THE Committee have to report that the usual courses of lectures have been given by the Professors of the Department in the Theatres of the Royal Dublin Society and Museum of Irish Industry (Appendix I.) Ten courses of lectures have also been given in provincial towns, followed as usual by examinations, the particulars of which are given fully in Appendix II.

The Committee have turned their attention to the establishment of local schools, under the regulations set forth in the Science Directory issued by the Department of Science and Art, but have as yet failed to find any resident local teachers to undertake the work. They have, however, in the meantime, in order to carry out this object as far as possible, employed a qualified teacher in chemistry, whom they have sent to three towns in succession (Limerick, Clonmel, and Cork), leaving him for a period of upwards of three months in each, in order to prepare a class for the annual examination of the Department. The attendance at Limerick was small, which is partly attributable to the period of the year at which the course was given; that at Clonmel was considerable, and an examination has been held there by the Department, which has exhibited highly satisfactory results: out of 39 candidates, 35 passed. Twenty of them took Queen's Prizes: seven first grade, seven second, and six third. The course at Cork is at present in progress.

The Committee have experienced some difficulty in establishing schools of this nature. Besides the difficulty of procuring qualified teachers, they find that local committees and institutes, which in this country have generally but a struggling existence, are unwilling to undertake the responsibility and incur the expense of providing suitable rooms and other essentials for keeping the schools open during a lengthened period. The receipts are very moderate, the fees being necessarily low, and the average number of pupils who will work continuously and steadily being small. A serious objection to the present arrangement arises from the long interval which must elapse between the instruction given by the teacher in the first, and even in the second, of the three towns, and the annual May examination, it being nearly impossible in the absence of the teacher to keep up the stimulus, and induce the students to read on for an object so remote. This objection the Committee hope in some degree to meet during the present year by sending the teacher to only two towns, and leaving him for a longer period in each. They expect to be enabled to do this as they have secured the services of a second teacher. The difficulty in the way of establishing schools is also much enhanced by the regulations of the Department, which, though perhaps very suitable to England, seem scarcely adapted to the present social condition and state of education in this country. Elementary education has not yet advanced sufficiently among the humbler classes to spread among them either the desire or the ability to study such subjects as come within the action of the Department. This country being chiefly agricultural, and manufactures being as yet but slightly developed, that large class known in England as operatives and artisans, and to whom the Department chiefly addresses itself, may be said to have but a limited existence here. Accordingly, the rule which limits the benefits of the Science Minutes, at least so far as the teachers remuneration is concerned, to operatives and their children, virtually excludes most of those whose previous general education would qualify them to derive benefit

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from instruction in scientific subjects. Among those who have availed themselves of the instruction given under the directions of the Committee, no inconsiderable proportion consists of children of country shopkeepers, farmers, and other persons of small means, who, while their whole annual income in many instances probably does not exceed that of a well-paid English operative, and while they must either obtain instruction of this nature for their children through the machinery brought home to their doors by this Committee, or be wholly debarred from it, are yet unwilling to rank themselves as operatives or artizans even if they could be brought within the meaning of these terms as defined by the Department.

Short courses of public lectures, followed after an interval by an examination as carried on by this Committee during the last few years, appear to be well suited to the present condition of the country, and calculated to draw public attention to the subject, and likely gradually to open the way to the introduction of a system more in accordance with the views of the Department. The answering at the examinations has shown that in many instances a considerable amount of continuous attention and study has been given by the students to the several subjects; but the indirect results which have followed, and which cannot be measured by statistical returns, appear to be not the least important of their effects. These courses (which have long been an institution in this country) have been the means of largely increasing the usefulness of local, literary, and scientific institutions, and mechanics' institutes, perhaps even of keeping them in existence. They have led to the establishment of these useful institutions in places where they previously did not exist, as for instance at Portlaw. That a public want is met by these lectures is evidenced by the unanimity of sentiment manifested in the large body of reports which were sent in answer to a circular from this Committee addressed to the different local institutions, requesting their opinion as to the utility or otherwise of these lectures, founded on the experience of past years. From the report of Sir John Young, President of the Baillieborough Literary Society, and late Chief Secretary for Ireland, a gentleman intimately acquainted with the social circumstances and wants of this country, they extract the following passage:—

“I may safely affirm that the discontinuance of these lectures would deprive a rising and intelligent class of people of sound elementary instruction in various branches to which it is most desirable in every point of view they should have access, but to which their chance of access is small indeed except through the door opened to them by your Committee.”

The mere sending out of this circular seems to have raised an apprehension in the minds of many that an idea was entertained of stopping the lectures, which seems to have amounted in their view to a grievance, and evoked a strong amount of feeling, of which abundant illustrations were given in the reports already referred to.

On the whole, the Committee consider that the combination of the two methods, as now carried on, viz., short public courses, delivered by eminent men of science, followed after an interval by an examination set by a competent examiner, and class or school instruction for a longer period by teachers sufficiently qualified for this purpose, is perhaps the best arrangement which present circumstances will admit of, and the most advantageous mode of applying the limited funds at their command. They are confirmed in this opinion by finding that it is exactly the course recommended in a series of resolutions adopted by the Council of the Royal Society of London, and concurred in by the Council of the British Association for the Advancement of Science in the year 1857, on the question as to whether any steps could be adopted by Government or Parliament calculated to promote the cause of science in this country. From these resolutions, to which their attention has been called by the

Rev. Dr. Lloyd, late President of the British Association, and a member of this Committee, they extract the following passage:—

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“The President and Council (of the Royal Society) recommend that the establishment of classes in metropolitan and provincial schools, where those who have not the means or opportunity of studying at the universities may be taught the elements of physical science on a systematic plan, be promoted by grants from government in aid of such funds as may be locally contributed for that purpose. That the promotion of provincial museums and libraries be encouraged in like manner, and that provincial lectures, accompanied by examinations, be established in Great Britain in towns which request this assistance and engage to provide a part of the expense; such lectures to be in aid of the schools above mentioned, so that by means of the two combined a sound knowledge of the principles and applications of science may be systematically taught.”

It is a gratification to the Committee to find that the course they are following agrees so closely with that recommended by these learned bodies, perhaps the highest authorities in the kingdom on such a subject.

The Committee have entered thus fully into this subject, as they apprehend that the department is not fully aware of the benefits resulting from these public courses of lectures, and would rather see them wholly replaced by school or class instruction, and they are impressed with the belief that any attempt to force on such a change too suddenly would not be judicious, being not unlikely to be attended with failure, and perhaps leading to a virtual exclusion of this portion of the kingdom from the benefits of the action of the Department; while at the same time they cordially concur in the desirableness of gradually introducing a more systematic plan of instruction, according as the spread of education among the humbler classes and perhaps the increase of manufacturing energy may prepare the way for it.

MAZIERE BRADY, C., Chairman.

Dublin, 14th January 1861.

I.

COURSES of PUBLIC LECTURES appointed by the COMMITTEE to be delivered in the THEATRE of the ROYAL DUBLIN SOCIETY and MUSEUM of IRISH INDUSTRY, during the SESSION of 1860-61.

12 on Zoology, by Prof. Kinahan, at Royal Dublin Society, commencing 2nd October 1860, at 4 o'clock.

12 on Zoology, by Prof. Kinahan, at Museum of Irish Industry, commencing 18th October 1860, at 8 o'clock.

12 on Physics, by Prof. Barker, at Royal Dublin Society, commencing 22nd October 1860, at 4 o'clock.

12 on Chemistry, by Prof. Sullivan, at Royal Dublin Society, commencing 12th November 1860, at 4 o'clock.

12 on Physical Geography by Prof. Jukes, at Museum of Irish Industry, commencing 15th November 1860, at 8 o'clock.

12 on Geology, by Prof. Jukes, at Royal Dublin Society, commencing 3rd December 1860, at 4 o'clock.

12 on Chemistry, by Prof. Sullivan, at Museum of Irish Industry, commencing 3rd December 1860, at 8 o'clock.

20 on Physics, by Prof. Barker, at Royal Dublin Society, commencing 7th January 1860, at 8 o'clock.

6 on Economic Botany, by Prof. Harvey, at Museum of Irish Industry, commencing 6th May 1860, at 8 o'clock.

10 on Botany by Prof. Harvey, at Royal Dublin Society, commencing 14th May 1860, at 4 o'clock.

10 on Botany, by Prof. Harvey, to be delivered in the Botanic Garden, Glasnevin, at such time as may be arranged by the Council of the Royal Dublin Society.

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II.
PROVINCIAL LECTURES AND EXAMINATIONS.

—	Places.	Lecturers.	Subjects.	Time of Lectures.	Average Attendance.	Day of Examination.	Number of Candidates.	No. of Prizes awarded.	Medals awarded.
1	Carrickfergus	Robert H. Scott, M.A.	Chemistry	May & June	166	27th June	17	10	James Taylor. Francis Eardley.
2	Dromore	Prof. Wyville Thomson	Physical Geography	June	270	30th July	26	6	
3	Sligo	Professor Sullivan	Chemistry	July	50	27th August	8	2	
4	Stokestown	Professor Davy	Chemistry	July	82	6th September	10	5	John McGreevy. Michael Mulhern.
5	Waterford	Dr. Lover	Electricity and Magnetism	July & Aug.	386	14th September	16	9	Wm. Sharpe. J. J. Lallan. J. Budd. Anna Peet.
6	Kinsale	Dr. Shaw	Astronomy	August	90	18th September	18	3	John Murray.
7	Portlaoigh	Professor Melville	Geology	August	48	20th & 21st Sept.	18	6	
8	Bailieborough	Professor Harkness	Geology	August	110	25th September	23	8	Thomas Hall.
9	Lisburn	Professor Wm. Barker	Heat and the Steam Engine	September	110	31st October	30	9	St. John Herd. Eccles Rico Coates.
10	Londonderry	Professor John Barker	Heat and the Steam Engine	October	133	12th November	10	4	
11	Limerick	Mr. John Dowling	Chemistry	May, June, & July.	11	10th August	9	2	Michael Malone.
12	Clonmel	Mr. John Dowling	Chemistry	Aug., Sept., Oct., & Nov.	Day 11 Evening 39	6th December	39	7. 1st grade 7. 2nd do. 6. 3rd do.	

APPENDIX X.

INDUSTRIAL MUSEUM OF SCOTLAND.

Appendix X.

Edinburgh, 1st January 1861.

INDUSTRIAL
MUSEUM,
SCOTLAND.

HAVING been appointed Superintendent of this Museum on the 15th of May, my report for the previous portion of the year can only refer to the state in which I found the collections, and the clerical portion of the business. With respect to the former, they were as carefully preserved as the very insufficient accommodations would admit of; and the latter, which is by no means small or unimportant, was in a state of regularity and completeness, reflecting very great credit upon Mr. Alexander Galletly, who had held the Museum in charge during the interval which elapsed between the death of my predecessor and my appointment.

I deem it proper also to state, that the indefatigable zeal of my predecessor, Dr. George Wilson, in establishing a correspondence with all parts of the world has been the means of creating for us a base of operations, which will be of very great advantage in the future development of the Museum.

In referring to the preceding reports, I find repeated complaints of the insufficiency of accommodation. The continual increase in the number of specimens has, of course, greatly added to this inconvenience, which has now become serious. Fortunately, however, there is great hope of an immediate remedy. A bill having been passed during the last session of Parliament for the purpose of purchasing Argyle Square, and the houses surrounding its south and west sides, it is expected that those tenements will be available for the purposes of the Museum early in June. At the same time the plans of Captain Fowke for the new building having been approved of by my Lords of the Privy Council, and of the Treasury, I am informed by Mr. Matheson, of the Office of the Board of Works, that the erection of the Museum building will be commenced during the next month.

Notwithstanding this fair promise of a termination to the difficulties which have hitherto impeded the progress of the Industrial Museum of Scotland, justice to those who have so liberally contributed the large number of donations at present in the Museum demands that every haste should be made to furnish proper accommodation for the collection, and to afford the public an opportunity of benefiting by them.

The donations during the current year have been very considerable, and whether applied for by me personally, or by writing, have been given with a degree of cheerfulness and liberality, which proves that sufficient interest, in these efforts of the Government, exists amongst the intelligent classes to ensure the acquisition of all desirable specimens. I have made two journeys during the past year through the manufacturing districts in England, and received abundant promises from the various firms I visited, many of which have been realized, and others are in active progress. In the important town of Birmingham I met with remarkable success, which I attribute, partly to the lively and intelligent feeling of interest I found entertained by the manufacturers in favour of an extended knowledge of their manufactures and manufacturing processes, and in no small degree to the extreme liberality of Mr. Ralph Hess, a Liverpool merchant, engaged largely in business with Birmingham, who devoted four entire days of his valuable time to giving me

Appendix X. personal introductions to the manufacturers, a kindness from which the Museum has largely benefited.

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The principal donations to the Museum during the past year consist of the raw materials of commerce, of which liberal contributions have been received (as will be seen by the detailed list given below), more especially of animal hairs and wools by Messrs. Jowett, Leeds, Messrs. T. & H. Littledale & Co., Liverpool, and Messrs. Isaac Hadwen & Co., Liverpool. Of cotton wools from every cotton growing country by Mr. J. Fishwick Stead, Liverpool. Other vegetable fibres by Mr. William Horner, of Liverpool. Of gums and other West African products by Mr. John Aspinall Tobin, of Liverpool. Of Indian drugs used in the *Materia-Medica* of India, by Dr. Christison of Edinburgh. Of general drugs used in British *Materia-Medica*, by Mr. Hawkins, drug-broker, Liverpool. Of indigo, by Messrs. Laing & Merridew, London. Of teas by Messrs. Phillips & Co., London; coffees by Messrs. Moffat & Co., Liverpool; spices by Messrs. Travers & Sons, London; tobaccos by Messrs. Samuelson & Pike, Liverpool, and the materials for glass-making by the Messrs. Chance, Brothers, Birmingham.

Specimens illustrative of the processes by which the raw materials are converted into manufactured articles are the most difficult, as well as the most desirable to obtain for an Industrial Museum, and it is with no small pleasure that I call attention to the additions which have been made in this department. The liberal and extensive firm of Messrs. Chance, Brothers, of Birmingham, have supplied a series of 280 full sized specimens illustrating the various operations and results of the glass manufacture. The Leeds Chamber of Commerce presented a series representing the manufacture of cast and malleable iron from the Farnley Iron Company. Messrs. Evans & Askin of Birmingham, through David Forbes, Esquire, have presented illustrations of nickel and cobalt smelting. A large series, consisting of 32 specimens, has been sent by the Messrs. Knowles of Bolton, showing the manufacture of cotton yarn. The novel electro-printing process is illustrated by 25 specimens of maps and prints contributed by the Electro-printing Block Company. The manufacture of agricultural and edge tools has been largely illustrated by the firm of J. Yates & Co., of Birmingham, who have sent an extensive series of tools and implements, of 61 different kinds, which they have promised to supplement by others, explanatory of the processes of construction. Another series, representing the spades and forks used in agriculture, has been received from Messrs. Parkes & Palmer of Birmingham; and Mr. J. C. Wynn has commenced a series of artisans' tools by sending a collection of those used by the boot and shoe-makers. Messrs. J. Yates & Son have sent 11 specimens illustrating the stages of progress in the production of a nickel silver spoon. And a most interesting series of about 80 specimens has been contributed by Messrs. Thomas Padmore & Sons of Birmingham, showing the processes used in the manufacture of ivory, bone, shells of various kinds, tortoise shell, &c., which with a few choice articles purchased from them, as examples of the perfection of their operations, form a most attractive and instructive group. Another interesting manufacture, that of the hook and eye, has been sent by Mr. Frearson, mechanical engineer of Birmingham, together with a set of sketches of the machinery used, which will enable me to have explanatory drawings made. And Messrs. Macfie & Sons of Liverpool have undertaken to supply specimens illustrating the process of sugar refining, and have already sent a first instalment of their contribution.

Of articles wholly manufactured, besides those included in the donations already mentioned, and those which are of a more strictly ethnological character, the following are some of the chief:—A large

collection of the special manufactures of the North British Rubber Company, Edinburgh; pattern guns, such as are used in the African trade and in the merchant marine service, are sent by Mr. W. Lucas Sargant of Birmingham; illustrations of the patent vegetable leather from Messrs. George Spill & Co., Stepney; bookbinding in cow hide leather, with specimens of the material, by Mr. Fraser, Liverpool. Tobacco in its various states of manufacture from Messrs. J. & J. Fletcher, and Messrs. Samuelson & Pike of Liverpool. We have also a collection of starches from Messrs. Travers & Son, and some very fine illustrations of the paraffin manufacture from Mr. James Young of Bathgate.

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The donations from abroad have been numerous, and both interesting and valuable. The African traveller, Dr. Livingstone, and his colleague, Dr. Kirk, have both sent specimens, some of which are already received, and a larger number have arrived in this country, and will soon be in the Museum. Mr. Bernard R. Ross, chief trader of the Hudson's Bay Company at Fort Simpson, and his colleagues, Mr. R. McFarlane, Mr. Andrew Flett, Mr. I. S. Onion, and the Reverend W. W. Kirkby, have sent a most interesting collection of native manufactures, and the natural products of their district. The Reverend Henry Calderwood of Cape Colony, and the Reverend Zerub Baillie of Old Calabar, have each presented various articles of interest collected from the natives of their localities, and Peter Wilson, Esquire, Colonial Surgeon, New Plymouth, has also made a considerable contribution from his locality; these and various smaller contributions of ethnological interest will prove of great value, when placed in contrast with the more useful and highly finished productions of civilised nations.

Amongst the specimens of a more miscellaneous character may be mentioned a large number of patterns of the textile fabrics of India, bound in six folio volumes, being the third part of an extensive series presented by the Indian Government through Dr. Forbes Watson, reporter on Indian products, together with a set of drawings of the plants yielding the principal commercial fibres of India and their microscopic characters. Also a full sized mahogany model of Wright's patent vice-jaw railway chair, accompanied with framed and glazed drawings showing the working of this and other inventions.

The Museum has also received from the Department of Science and Art, duplicates of the interesting collections of articles of Chinese food; and the beautiful murexide colours obtained from guano. And I may add that three hundred and eighty specimens selected from my own collection previous to its dispersion have been presented by myself.

The chief additions made to the Library of the Museum have been by purchase of such necessary works of reference as the business of labelling, &c., required. A few donations have, however, been received. These are a complete set of the Zoological Catalogues of the British Museum, most valuable for assisting to determine species accurately, the reports and maps of the Canadian Geological Survey for 1853-4-5-6 & 57, and the report of the Superintendent of the United States Coast Survey for 1857.

Amongst the most important purchases added to the collection I may specify a very considerable and valuable series of the manufactures of Japan, which were obtained at the sale of Dr. Ivor Murray's collection; a beautiful model of a paper-making machine, one-fourth of the actual size; a model of a lead mine at Freiberg, and a model of a sulphuric acid manufactory. The whole of the donations and purchases will be found detailed in the following list.

Besides those contributions which have already been received as the result of my personal applications to manufacturers and others, satisfac-

Appendix X. tory and reliable promises have been received from several eminent firms, amongst which I may enumerate Messrs. Elkington & Mason, who have agreed to contribute works of art to the extent of 75*l.* in value, in electro-deposit; Messrs. Cartwright & Woodward of Birmingham are also preparing a series of illustrations of the application of electro-metallurgy to articles of taste and utility, and Messrs. Ratchiffe & Co. of Birmingham have also agreed to enrich this most interesting part of the collection. In the works of bronze, brass, white-metals, copper, iron, tin, and the manufacture of gold chains, illustrative series are being prepared, and in some cases are almost completed, by the eminent firms of Mr. B.W. Goode, Messrs. Messenger & Son, Messrs. Winfield & Son, Messrs. Spurrier, Messrs. Griffiths & Browett, and Messrs. Taunton & Hatton, all of Birmingham. Illustrations of the manufacture of arms are also promised by other extensive manufacturers of that town, as swords by Messrs. Mole, and gun-barrel rifling by Messrs. Adams. At Birmingham also, Messrs. Lane are preparing for us illustrations of gold beating and making gold and bronze powder; Messrs. Halbeard and Stamps are doing the same for the papier mâché manufacture; and Messrs. Derry & Jones have promised to contribute series of the processes of manufacture in various silver articles of personal utility.

In raw produce the leading Liverpool brokers, especially Messrs. Rooke, Okell, & Spence, Messrs. Cox, Brothers, Messrs. Brown, Hunter, & Co., Messrs. T. & H. Littledale & Co., Mr. Henry Gardiner, Mr. H. W. Hawkins, and Mr. H. W. Jackson have promised their assistance to complete that portion of our collection. I have also received most liberal promises from the Chamber of Commerce, Bradford, the Messrs. Forster of Bradford, and numerous others in London, Coventry, Manchester, and elsewhere, which, when realized, will greatly increase the already extensive collections of this Museum.

I have the honour to be, &c.

T. C. ARCHER, Superintendent.

LIST of DONATIONS to the INDUSTRIAL MUSEUM of SCOTLAND, } from the
1st January to the 31st December 1860.

Specimen of pectolite from Ratho quarry, near Edinburgh.

Presented by Mr. W. A. Jardine.

23 specimens, including New Zealand flax, with ropes, baskets, &c., made from it; green jade axe; dye barks, &c., from New Zealand. Native cloth, coco fibre, and combs from the Fiji islands.

Presented by Peter Wilson, Esq., Colonial Surgeon, New Plymouth.

6 earthenware vessels for carrying water and cooking.

3 specimens of palm fibre, and 14 dresses made from it.

2 mats or beds; specimen of intoxicating bark.

2 slings for climbing palm trees, &c., from Old Calabar.

Presented by the Rev. Zerub Baillie, Old Calabar.

36 specimens illustrating the manufacture of cast and malleable iron, from the Farnley Iron Company, near Leeds.

23 specimens of foreign and colonial wools, from Messrs. R. Jowitt and Sons Leeds.

Presented by the Leeds Chamber of Commerce.

Specimens of Caffre manufacture, including 2 chief's head dresses; breast and pouch ornaments; gourd snuff box; necklace, bracelets, armlets, anklet, &c.

Presented by the Rev. Henry Calderwood, Cape Colony.

73 specimens of vegetable preparations of Indian *Materia medica*.

1 specimen of safflower seed, the source of Macassar oil.

Presented by Professor Christison, University, Edinburgh.

Lithographic stone broken in use, showing dendritic markings.

Appendix K.

Presented by Mr. William Dawson, Post Office, Nicholson Street, Edinburgh.

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3 large specimens of China grass; 3 samples of yarn, and 3 of cloth, made from the same.

Presented by Mr. John Graham Morison, 46, Charlotte Square, Edinburgh.

Antelope horn fitted up as a tobacco pipe, used by the natives on the Delta of the Zambesi; 2 baskets of palm fibre and a wooden pillow made by the same.

Ornamental grass reticule, basket, and cigar case, from Sierra Leone; prepared camwood as sold in the native market, Free Town, Sierra Leone.

Presented by Dr. Kirk, of the Livingstone Expedition.

45 specimens of substances used as food by the Chinese.

8 specimens, illustrating the manufacture of murexide colours from guano.

Presented by the Science and Art Department, London.

71 specimens of vegetable substances used as food, including those used for diet drinks, meals, starches, spices and narcotics; fruits, seeds, &c.

28 specimens of vegetable substances used in dyeing and tanning.

51 do. of gums, resins, waxes, oils and oil seeds, &c.

14 do. of vegetable fibres.

5 do. of vegetable substances used in perfumery.

28 do. of ornamental seeds and miscellaneous objects.

44 do. of materia medica.

22 do. of raw and manufactured silks.

12 do. of molluscous animals used as food.

41 do. of miscellaneous animal products, including 2 finely carved shells, different shells used in the arts, horns, insects, &c.

42 do. of minerals, ores, and metals.

22 do. of miscellaneous articles, including papers, coins, &c.

Presented by Professor T. C. Archer, Superintendent of the Museum.

An aromatic fruit allied to the Meleguetta pepper, said to be from Central Africa.

Presented by Mr. Henry Sugden Evans, Liverpool.

Fine specimen of crystallized slag from the refining process in the manufacture of malleable iron.

Presented by R. Cassels, Esq., Glasgow Iron Company, Motherwell.

6 specimens of ores, including those of copper, zinc, and iron from Erins, Loch Fyne, Argyleshire.

Presented by W. Forlong, Esq., of Erins.

A New Zealand carving in green jade.

Presented by Mrs. William Chambers, Edinburgh.

3 specimens of Apatite from Krageroe, Norway.

12 do. illustrating the smelting of nickel and cobalt.

Presented by David Forbes, Esq., F.G.S., Calthorpe Street, Birmingham.

Specimen of African india rubber, American moss, cocoa shell, American linseed cake, and alumina cake.

Presented by Mr. Henry Gardner, broker, Liverpool.

Bunch of the currant grape from Zante.

Presented by Mr. William Benbow, Liverpool.

19 specimens of gums and lacs; 8 specimens of substances used in materia medica; 8 specimens of wax, tallow, and paraffin; specimens of asphalt, verdigris, tincal and borax, plumbago, crude antimony, &c.

Presented by Mr. Hawkins, drug broker, Liverpool.

3 specimens of American rosin and 1 of English; specimens of gum Senegal and gum myrrh; flag and roll annato; Lima and Cape de Verde Orchella weed.

Presented by Mr. F. Law, broker, Liverpool.

13 pieces of the monilla, or copper ring money current on the West Coast of Africa.

Presented by Mr. Dawson, merchant, Liverpool.

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Appendix X. Specimen of sandstone with stellate crystallization of manganese, Prenton, Cheshire.

INDUSTRIAL
MUSEUM,
SCOTLAND.

Presented by Mr. John Cunningham, architect, Liverpool.

- 10 specimens of native minerals, including sulphur, common salt, ochre, pipe clay, ironstone, lignite, &c., from the Hudson's Bay Territory.
- 26 specimens of dresses and parts of dresses from different Indian tribes made from the skins of the rein-deer and moose-deer.

6 pairs of snow shoes, real size and in model (3 of them in process of manufacture), and a snow walking stick.

- 25 objects of Indian manufacture, including knives, bows and arrows, dog harness and whip, willow bark net and needle, birch bark baskets, stone pipes, &c.

Presented by Mr. Bernard R. Ross, of the Hudson's Bay Company, Fort Simpson.

Chief's dress from the Kootchin Indians.

Presented by the Rev. W. W. Kirkby through Mr. Bernard R. Ross.

Esquimaux bone knife; birch touchwood or spunk from Fort Simpson.

Presented by Mr. J. S. Onion through Mr. Bernard R. Ross.

Stone calumet from the Chipewyan Indians; shoes with fine quill work from the Loucheux Indians.

Presented by Mr. Andrew Flett through Mr. Bernard R. Ross.

Esquimaux specimens, including chief's dress coat and trousers, women's dress, boy's coat, under shirt, mittens, dressed rat skin, ivory bow needles, needle case, fishing hook, lance heads of ivory and horn, wooden fire producer, walrus hide line, and set of dog traces. Shoes, sinew thread, and babiche hunting bag from the Hare Indians.

Presented by Mr. R. McFarlane through Mr. Bernard R. Ross.

- 8 pattern guns, including those used in the merchant service, Cape Colony, palm oil districts of Africa, and Hudson's Bay Territories. Brass and iron furniture for a fuzil gun.

Presented by Mr. W. L. Sargant, Birmingham.

- 11 specimens of South American horse and cow hair imported into Liverpool for use in the manufactures.

Presented by Messrs. Isaac Hadwen & Co., Liverpool.

Full-sized mahogany model of Wright's patent vice jaw railway chair; framed and coloured engravings of Wright's patent solid iron sleepers and rails, bed plate, permanent ways, and bed plate iron safety railway.

Presented by Mr. Thomas Wright, 9, George Yard, Lombard Street, London.

- 9 pieces of patent vegetable leather, and a pair of leggings made of the same.

Presented by Messrs. George Spill and Co., Stepney Green, London.

Gold and silver mounted knife and style for writing on palm leaves from Ceylon. Another knife for the same purpose (imperfect).

Presented by Andrew Walker, Esq., late Ceylon Civil Service, 5, Atholl Place, Edinburgh, through Dr. Douglas McLagan.

Knife from the River Zambesi.

Presented by Dr. C. Knox Ord, 25, George Square, Edinburgh.

Plate of "silver lustre" earthenware (coated with platinum).

Presented by Mr. Warrington, Apothecaries Hall, London.

Specimens from Sierra Leone, including 2 gums, 2 oil-yielding seeds, capsicum pods, orchella weed, seeds of the prayer liquorice, line and net from an unknown fibre, pair of spoons and chain carved out of one piece of wood, and copper ore.

Presented by Mr. J. Aspinall Tobin, merchant, Liverpool.

Copy of "Bain's History of Liverpool," richly bound, to shew the adaptation of the hide of the cow for book-binding purposes; 8 specimens of the kind of leather used.

Presented by Mr. James Fraser, bookbinder, Liverpool.

- 32 specimens illustrating the processes in the spinning of cotton yarn.

Presented by Messrs. J. & G. Knowles, Bolton.

- 25 specimens of maps and prints illustrating the electro-block-printing process. Appendix X.

Presented by the Electro-printing Block Company, London.

INDUSTRIAL
MUSEUM,
SCOTLAND.

- Agricultural and edge tools, including 19 hatchets, 7 adzes, 11 hoes, 5 pick-axes, 7 shovels and spades, 5 cane bills, 5 trowels, ship scraper, 2 augurs, &c.

Presented by Messrs. J. Yates & Co., Pritchett Street, Birmingham.

- 11 specimens illustrating the stages in the production of a nickel silver spoon.

Presented by Messrs. J. Yates & Sons, Birmingham.

- 8 agricultural forks and 1 spade.

Presented by Messrs. F. Parkes & J. Palmer, Birmingham.

- 22 specimens of raw cottons from different countries.

Presented by Mr. J. Fishwick Stead, Liverpool.

- 6 specimens of indigo including one 100 years old.

Presented by Messrs. Laing & Merridew, London.

- 22 prints of Indian plants yielding textile fibres, in duplicate.

Presented through Dr. Forbes Watson, Reporter on the Products of India.

- 18 specimens of hemp from various countries.

- 8 specimens including jute, Manila hemp, China grass, coir and other fibres.

Presented by Mr. William Horner, Liverpool.

- 8 specimens of raw coffee.

Presented by Messrs. Moffatt & Co., Liverpool, through Mr. Henry Gardner, Broker, of Liverpool.

- Series of specimens (about 90) illustrating manufactures from ivory, bone, vegetable ivory, coquilla nuts, ebony, tortoiseshell, and mother-of-pearl.

Presented by Messrs. T. Padmore & Sons, Birmingham.

- Series of specimens illustrating the manufacture of glass, including 13 specimens of raw materials; 47 specimens of various kinds of ordinary and extra white sheet glass, including the stages of manufacture; 21 specimens of various kinds of crown glass, including the stages in its manufacture; 3 specimens of thin microscopic glass; 12 specimens of patent plate glass, including the stages of grinding and polishing; 46 specimens of rolled plate glass, including slates, tiles, deck lights, photographic vessels, &c.; 71 specimens of miscellaneous glass objects, including those used for horticultural and domestic purposes, and glass shades; 20 specimens of coloured glass; 19 specimens of white and coloured lenses for railway and ship signals, &c.; 12 specimens of ornamental glass (3 richly coloured) and a stencilling plate; 15 specimens of optical glass, including 9 discs and lenses for astronomical and photographic purposes; and a book of patterns.

Presented by Messrs. Chance, Brothers, Glass Works, near Birmingham.

- 65 specimens of Foreign, Colonial, and British wools.

Presented by Messrs. T. & H. Littledale, through Mr. Eccles Haigh, Liverpool.

- 17 specimens of tobacco of different countries as imported.

Presented by Messrs. Samuelson & Pike, Liverpool.

- 7 specimens of manufactured tobacco.

Presented by Messrs. J. & J. Fletcher & Co., Liverpool.

- Net for catching antelopes made of the bark of the baobab.

Presented by the Rev. Dr. Livingstone.

- 6 specimens of roofing slates from Lethol quarry, near Brechin.

Presented by Mr. Alex. Mitchell, Lessee.

- 45 specimens, forming a collection of shoemakers' tools.

Presented by Mr. J. C. Wynn, Birmingham.

- 4 preparations from the fruit and root of the bael tree.

Presented by Mr. M. G. Gould, London.

- 3 cards of specimens illustrating the stages in the manufacture of hooks and eyes.

Presented by Mr. J. Frearson, Birmingham.

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Appendix X. Specimen of naphthaline and of rosolate of lime.

Presented by Mr. C. Kurtz, Liverpool.

INDUSTRIAL
MUSEUM,
SCOTLAND.

36 specimens of tea from China, Japan, Assam, and Java.

2 do. of Natal coffee from Ceylon and Mocha seeds.

Presented by Messrs. Phillips & Co., 8, King William Street, City, London.

36 specimens of spices ; 18 specimens of farinaceous products used as food ;
17 specimens of starches and blues for laundry purposes.

Presented by Messrs. Travers & Sons, St. Swithin's Lane, London.

15 specimens to illustrate the sugar manufacture, being a first instalment.

Presented by Messrs. Macfie & Sons, Liverpool.

7 specimens of raw india-rubber from different countries ; 25 specimens of
india rubber boots, shoes, and slippers of various kinds ; 23 specimens of
belting, valves, pipe joints, railway buffer, and other mechanical applica-
tions of india rubber.

Presented by the North British Rubber Company through D. D.
Williamson, jun., Esq., Manager.

Small elliptical table made of clay-ironstone (septarium), from the Lanarkshire
coal field. Hand mill, or Quern. Geological model of Arthur's Seat and
the Queen's Park, by J. R. Wright, F.G.S. Model of a hill farm.

Presented by the Highland and Agricultural Society of Scotland:

Large specimens of paraffin, paraffin candles, and paraffin oil from the Tor-
banehill coal.

Presented by Mr. James Young, Bathgate Chemical Works.

DONATIONS TO THE LIBRARY.

Report of the Canadian Geological Survey for 1853-54-55-56. 1 vol.
8vo. cloth.

Ditto, ditto for 1857. 1 vol. 8vo. unbound.

Atlas of Geological Maps.

Presented by Sir William Logan through Edmund Logan, Esq., W.S.

Report of the Superintendent of the United States Coast Survey for 1857.
1 vol. 4to. cloth.

Presented by Professor A. D. Bache, Superintendent of the Survey.

A set of the British Museum Catalogues and Lists to Nov. 7th, 1860.
131 volumes and pamphlets.

Presented by the Trustees.

LIST of SPECIMENS added to the INDUSTRIAL MUSEUM of SCOTLAND, by purchase, from the 1st January to the 31st December 1860.

	£	s.	d.
18 pieces of Majolica ware	-	-	38 12 6
Apple-peeling machine	-	-	0 17 6
Swedish specimens, consisting of 2 snuff boxes of birch bark, hat brush, and 3 cards of lace	-	-	1 6 5
Sheet of views of Hamburgh, in metal	-	-	0 9 0
4 brooches and piece of shell from which they are made	-	-	1 5 6
Polarizing apparatus in case, with designs for same	-	-	5 15 0
30 specimens of Austrian porcelain	-	-	2 16 0
Carved meerschaum pipe	-	-	0 13 6
7 specimens showing mode of setting Bohemian garnets	-	-	0 12 6

	£	s.	d.	Appendix X.
Small specimens of Bohemian glass - - - -	0	2	0	INDUSTRIAL MUSEUM, SCOTLAND.
Plate produced by a deposit from mineral water - - - -	0	3	2	
25 specimens of Swedish pottery - - - -	0	16	16	
Model of a sulphuric acid manufactory - - - -	20	0	0	
2 framed drawings of an experimental tubular boiler - - - -	7	7	0	
Model of a German mine - - - -	42	0	0	
Group of steinbocks in carved wood - - - -	2	16	0	
Group of chamois in ditto - - - -	2	0	0	
Model of a Swiss chalet - - - -	2	0	0	
Vase in carved wood - - - -	1	12	0	
2 carved cameo shells - - - -	0	12	6	
Group of birds in Dresden porcelain - - - -	3	13	6	
Drake, in ditto - - - -	3	3	0	
Model of a paper-making machine (scale one-fourth the real size) -	200	0	0	
Model diagrams of a pump, steam engine, 5 parallel motions, gas meter, mortising machine, pianoforte, link motion, electric telegraph, and reciprocating motion - - - -	6	3	6	
2 ivory billiard balls - - - -	0	16	0	
Mother-of-pearl card case and tortoiseshell ditto - - - -	0	14	0	
Mother-of-pearl portfolio - - - -	1	15	0	
Inlaid hair brush - - - -	0	9	0	
Mother-of-pearl paper knife and seal - - - -	0	17	6	
Collection of Japanese specimens (about 100) including lacquer work, porcelain, bronzes, papers, &c. - - - -	76	13	0	
13 specimens of Swiss and French marbles - - - -	2	11	2	
An ibex in carved wood - - - -	1	12	0	
Chamois skin prepared as a rug - - - -	1	16	0	

NUMBER of SPECIMENS acquired in 1860.

Presented - - - -	1,797
Purchased - - - -	265
	<u>2,062</u>

APPENDIX Y.

Appendix Y. REPORT of the REGIUS KEEPER of the MUSEUM OF NATURAL HISTORY, EDINBURGH, for the YEAR 1860.

NATURAL
HISTORY
MUSEUM,
EDIN-
BURGH.

THE condition and progress of the Museum of Natural History during the year 1860, continue to present the satisfactory features which for several previous years I have had the pleasure of being able to embody in my reports.

There is still abundant evidence of the unabated interest taken by the public in the collection, as seen not only in the very large attendance on free-days, but in the liberal donations which during the past year have been made to the Museum by men who recognize its importance in the promotion of scientific knowledge, and see in it a valuable aid to an enlarged and enlightened public instruction.

During the year which has just terminated the Museum was visited by 79,956 persons. Of these 2,769 consisted of such of the general public as applied on close days, and were admitted at a charge of sixpence each, while 79,956 were admitted without charge on Saturdays and public holidays, and the remainder, amounting to 589, consisted of students belonging to the University or admitted by the Regius Keeper, on special ticket for *bond fide* study, and of professors, members of the town council, and such visitors as may have been introduced by them. (See more detailed table at the end of the report.)

The receipts derived from admission on close days, at a charge of sixpence, amount for the year to the sum of 69*l.* 4*s.* 6*d.*

The following table presents a comparative view of the number of visitors, and of the total sum received for admission during each of the years, 1857, 1858, 1859, and 1860.

Year.	On Free Days.	At a Charge of Sixpence.	Others.	Total.	Receipts.
1857 - - - -	71,827	2,900	1,027	75,754	£ s. d. 72 10 0
1858 - - - -	85,523	2,756	549	88,831	68 18 0
1859 - - - -	84,417	3,461	472	88,350	86 10 6
1860 - - - -	79,956	2,769	589	83,314	69 4 6

I can continue to bear testimony to the general good conduct of the visitors, and to the satisfactory fact that no injury of any consequence has been suffered by the collection, though the overcrowded state of the rooms on public days has occasionally given rise to some anxiety for the safety of the objects exhibited.

The additions during the past year have been numerous, and some of them of much interest. They were obtained both by donation and purchase.

Among the donations may be especially mentioned the following:—

Bones of the *Dinornis*, from New Zealand, presented by P. W. Wilson, Esq., colonial surgeon, New Zealand.

Several specimens of *Graptolites*, from the Lower Silurian rocks of Moffat, presented by Mr. J. Stevenson, of Glasgow.

A magnificent specimen of *Halechondria palmata*, from the Caithness coast, presented by Mr. David Gunn, of Wick, through Mr. Charles W. Peach.

Two specimens of *Dasyurus viviparus*, from the banks of Owen's River, Victoria, presented by James Cunningham, Esq.

Some rare specimens of marine *Invertebrata*, from Montrose, presented by the late Wm. Beattie, Esq.

A specimen of *Uraster glacialis*, of colossal dimensions, taken off the coast of Harris, and presented by Capt. Thomas, R.N.

A specimen of *Syngnathus aquoreus*, presented by Dr. J. A. Smith.

A painted calabash, from the Buda Indian tribes, North America, presented by Capt. Archer, 60th Rifles.

Several species of *Terrestrial Gasteropoda*, from Ceylon, and a skull belonging to a young individual of one of the native tribes of the Malabar coast, presented by Mr. Dyce Duckworth, student in the University.

Some Crustacean parasites, from the Firth of Forth, presented by Mr. Robert Brown, student in the University.

Arachnida and *Insecta*, from the West Indies, presented by Mr. J. Tod, student in the University.

T. C. Archer, Esq., superintendent of the Industrial Museum, has presented a large number of interesting specimens, among which may be enumerated the following:—

(1.) A portion of the tusk of *Elephas primigenius*, from an iceberg in Baffin's Bay.

(2.) A molar tooth of the Asiatic elephant.

(3.) A specimen of *Cleodora*.

(4.) A number of sponges from the Australian seas.

(5.) A specimen of *Leptocephalus longirostris* from the Mid Atlantic.

(6.) A large collection of valuable shells from the East Indian seas.

Principal Forbes, on the occasion of his translation from the chair of Natural Philosophy in the University of Edinburgh to the Principalship of the University of Saint Andrews, presented the Museum with (among other objects) several interesting physical maps and diagrams; a valuable series of casts of the fossil foot-prints discovered at Corn Cockle Muir; a large series of lavas from Etna; and a highly instructive specimen of carbonized wood enveloped in an ancient lava-mass from the district of the Rhine.

A magnificent skull and tusks of the Asiatic elephant, killed in Ceylon by James Maitland, Esq., was presented by Mrs. Hogg, of Newliston.

A collection of the skins of birds, and of other animals from India, was presented by Dr. V. M. McMaster, 6th Dragoons (late of the 79th Highlanders).

A fine specimen of the Bactrian camel, brought to this country by the Royal Artillery on their return from the Crimea, had been presented by the regiment to Her Majesty. The animal, which had since then been kept at Holyrood Palace, died at the beginning of the present winter, and the body was handed over by the Board of Works to the Museum. I have had the skin removed for the purpose of being stuffed, and the skeleton is now being prepared with the view of adding it to the osteological department of the collection.

But the most interesting addition made to the Museum during the past year is a collection from the island of Aneitum, New Hebrides, presented by the Rev. John Inglis on his return to this country from his missionary labours in that part of the world. In May 1857, at the suggestion of Dr. Greville, I despatched to Mr. Inglis, then resident in Aneitum, a box containing small casks, jars, methylated spirits, and other appliances used in the preparation of objects of natural history, together with instructions drawn up by Mr. Davies, the assistant conservator, for collecting and preserving the specimens, and a quantity of

Appendix Y. fishing-hooks, lines, &c., to be employed in exchange with the natives, for natural history objects collected by them.

NATURAL
HISTORY
MUSEUM,
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BURGH.

Mr. Inglis made good use of the facilities thus afforded, and spared no trouble in executing the commission intrusted to him. He returned last year to this country with a very interesting collection of the natural history products of Aneitum, all which have been handed over to the museum.

The collection consists of corals, sponges, *Echinodermata*, *Mollusca*, including specimens of *Nautilus Pompilius* with the animal, *Crustacea*, fishes, reptiles, birds, small mammals, &c.; and also some specimens of native manufacture and other objects illustrative of the Ethnology of the New Hebridean tribes.

In recording this valuable donation, I cannot allow the opportunity to pass of specially expressing our obligation to Mr. Inglis, who, in the midst of his laborious missionary exertions among a remote tribe, was not unmindful of the interests of science, and of the advancement of natural history knowledge in his native city.

Various departments of the Museum have been further enriched during the past year by purchase. Among the most important of these purchases must be mentioned several groups of typical and illustrative fossils obtained from Mr. Louis Sæmann of Paris, including a large and valuable collection of *Foraminifera*, a collection of fossils from the "Molasse" of Switzerland, an illustrative collection of corals from the Jurassic Rocks of Wurtemberg, a collection of Devonian fossils from the Eifel, of Silurian fossils from Bohemia, and a large collection, consisting of 300 species, from the Tertiary formations of Italy.

The fishes of the Firth of Forth, from the collection of the Royal Society of Edinburgh, have all been re-mounted and labelled.

The Zoophytes, *Echinodermata* and *Crustacea*, purchased last year from Dr. Greville, have also been mounted and labelled.

Many new preparations in spirits have been put up, and such of the old spirit preparations that needed it have been re-mounted.

A large number of fossils have also been mounted and labelled.

Several additions have been made to the gallery of zoological types, and also to the collection of typical fossils. The object of the gallery of zoological types is to afford to the student a comprehensive view of the general *plan* of the animal creation, and of the principles which must guide him in his attempts at a philosophical classification. Its value in this respect is abundantly apparent, and is fully appreciated by the student, who finds in it an aid which he might in vain seek from any collection where the representation of typical forms in contradistinction to a detailed display of species did not constitute the main idea in its formation and arrangement. The object aimed at in the selection and arrangement of the specimens composing the collection of typical fossils is that of enabling the practical geologist to become acquainted with the more important species by which the various geological formations are characterized; and at the same time by presenting to the zoological student a general picture of the nature and order of succession of the past life of the globe, to enable him to connect the palæontological history and present state of organization in one unbroken system, whose different members mutually illustrate and explain one another.

A large number of specimens which, were there room for their display, would be exhibited in the general collection, continue to be laid up in boxes, and deposited in the store-rooms of the Museum. As many of these are of a perishable nature, they require constant attention to secure them from deterioration; they are therefore subjected to frequent and careful inspection, and I have again the pleasure of being able to report that they are in almost every instance in a good state of preservation.

GEO. J. ALLMAN, Regius Keeper.

TABULAR ABSTRACT of the NUMBER of VISITORS to the MUSEUM of NATURAL HISTORY, EDINBURGH, for the Year ending 31st December 1860.

—	Paying ad. each.	Professors, Town Council, and others by whom introduced.	Free.	Natural History Students, University of Edinburgh.	Natural Science Students Free Church College.	With Special Ticket.	Matriculated Students.			Total for each Month.	Receipts.		
							University of Edinburgh.	Free Church College.	United Presbyterian College.		£	s.	d.
1860:													
January	178	3	16,366	25	—	5	2	—	—	16,579	4	9	0
February	58	20	2,511	25	—	4	1	—	—	2,619	1	9	0
March	110	6	3,282	72	—	8	—	—	—	3,478	2	15	0
April	140	3	2,581	22	—	8	2	—	—	2,756	3	10	0
May	213	4	6,508	51	—	8	1	—	—	6,785	5	6	6
June	255	—	5,272	78	—	30	—	—	—	5,635	6	7	6
July	466	2	8,295	96	—	6	—	—	—	8,865	11	13	0
August	668	4	8,874	3	—	—	—	—	—	9,549	16	14	0
September	292	5	7,430	—	—	9	—	—	—	7,756	7	6	0
October	155	14	4,241	—	—	7	—	—	—	4,417	3	17	6
November	173	12	4,328	18	—	1	13	—	—	4,545	4	6	6
December	61	2	10,248	13	—	—	6	—	—	10,330	1	10	6
Total	2,769	75	79,956	403	—	86	25	—	—	83,314	£69	4	6

(Signed) GEO. J. ALLMAN, Regius Keeper.

Appendix I.
NATURAL
HISTORY
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BURGH.

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APPENDIX Z.

Appendix Z. STATEMENT of EXPENDITURE of the several DIVISIONS of the SCIENCE
AND ART DEPARTMENT, for the Period from 1st April 1860 to
RETURN OF 31st March 1861.
EXPENDITURE.

Heads of Service.	Total Expenditure.
	£ s. d.
General management, Salaries	4,098 10 7
Incidents	282 4 6
Examples, diagrams of science and art	21,412 8 9
Purchasing books for circulating library	900 0 2
Instruments, books, medals, &c.	2,501 1 3
Grants in aid of building Art Schools at Coventry and Lambeth	
Salaries and payments in aid, &c.	17,497 1 6
Inspection and examination	3,042 17 9
Travelling expenses	1,920 1 7
Photographic apparatus, &c.	1,670 9 9
South Kensington Museum	3,214 18 3
Collections at South Kensington of educational apparatus	788 2 2
Preparation and illustration for catalogue	299 13 8
Labour of attendants and artizans	3,231 9 5
Police	1,182 6 0
Lighting, fires, and gas in Museum, &c.	2,155 6 5
Works and repairs	5,655 14 1
Keeping in order the grounds	270 13 1
Advertisements, labelling objects in Museum	850 16 9
£	70,973 15 8.

AT JERMYN STREET.

Heads of Service.	Total Expenditure
	£ s. d.
Salaries	4,015 8 10
Purchase of specimens for Museum, &c.	1,395 5 6
Purchase and construction of mining models	166 9 10
Purchase of mining records	98 4 4
Outfit and illustration for lectures	200 18 0
Laboratories	99 5 0
Police attendance	57 8 0
Advertisements and printing	211 16 0
Travelling expenses	99 7 11
Prizes	55 0 0
Incidents	306 5 4
£	6,705 8 9.

GEOLOGICAL SURVEY.

Appendix Z.

Heads of Service.										Total Expenditure.			RETURN OF EXPENDITURE.	
										£	s.	d.		
Salaries	.	.	.	.	.	.	.	.	.	7,452	18	6.		
Travelling expenses	.	.	.	.	.	.	.	.	.	1,111	4	2		
Incidents	.	.	.	.	.	.	.	.	.	181	9	1		
										£	8,745	11	9	

INDUSTRIAL MUSEUM, SCOTLAND.

Heads of Service.	Total Expenditure.
	£ s. d.
Salaries	804 3 2
Purchase of specimens for Museum	768 18 10
Temporary buildings, and ordinary repairs, fittings, &c.	199 17 4
Fuel and light, cleaning, &c.	91 17 10
Advertisements	19 4 6
Travelling expenses	69 17 1
Incidents	118 8 0
£	2,072 0 9

ROYAL DUBLIN SOCIETY.

Heads of Service.	Total Expenditure.		
	£	s.	d.
General objects of the Society	6,000	0	0
£	6,000	0	0

ROYAL HIBERNIAN ACADEMY.

Heads of Service.	Total Expenditure
	£ s. d.
Royal Hibernian Academy	300 0 0
£	300 0 0

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Appendix Z.

MUSEUM OF IRISH INDUSTRY.

RETURN OF
EXPENDI-
TURE.

Heads of Service.		Total Expenditure.		
		£	s.	d.
Salaries		2,119	12	0
Provincial lecturers		500	0	0
Purchase of specimens for Museum, &c.		492	11	2
Outfit and illustration for lectures		299	12	6
Prizes		50	0	0
Rent, rates, and taxes		228	18	8
Repairs, furniture, fittings, &c.		553	11	7
Laboratories		100	1	1
Fuel and light, soap, cleaning, &c.		200	18	5
Uniforms for attendants		62	10	0
Advertisements and printing		99	19	2
Travelling expenses		49	18	6
Incidents		230	1	10
		£	4,987	14 11

SUMMARY.

Establishments.		Total Expenditure.		
		£	s.	d.
Department of Science and Art, South Kensington, including				
General management		70,973	15	8
School of Science and Geological Museum, Jermyn Street		6,705	8	9
Geological Surveys, Great Britain and Ireland		8,745	11	9
Industrial Museum, Scotland		2,072	6	9
Royal Dublin Society		6,000	0	0
Royal Hibernian Academy		300	0	0
Museum of Irish Industry		4,987	14	11
		£	99,784	17 10

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